

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 225.—Vol. IX.]

LONDON: SATURDAY, DECEMBER 14, 1839.

[PRICE 6D.]

PUBLIC COMPANIES.

MEETINGS.

BAHIA STEAM NAVIGATION COMPANY.—Notice is hereby given, that a HALF-YEARLY GENERAL MEETING of proprietors of the Bahia Steam Navigation Company will be held at the George and Vulture Tavern, George-yard, Lombard-street, in the city of London, on Monday, the 26th current, at Twelve for One o'clock precisely, to receive the report of the directors, in which the attention of the proprietors will be called to matters demanding their most serious consideration. By order of the Board of Directors, Lombard-street-chambers, Dec. 10. G. H. HEPPEL, Sec. ad interim.

BOLIVAR MINING ASSOCIATION.—Notice is hereby given, that the ANNUAL GENERAL MEETING of the proprietors of the Bolivar Mining Association will be held at the offices of the Association, 9, Warrington-street, Throgmorton-street, in the city of London, on Tuesday, the 31st inst., at One o'clock in the afternoon precisely.—Dated in London, the 12th day of December. ALEXANDER ALLEN, Sec.

CONSOLIDATED COPPER MINES OF COBRE ASSOCIATION.—Notice is hereby given, that a SPECIAL GENERAL MEETING of proprietors of this Association will be held at the office of the Association, 25, Austin-friars, on Friday, the 20th day of December next, at Eleven o'clock precisely, for the purpose of electing a director in the room of Charles Pascoe Grenfell, Esq., resigned; and immediately after such election, another Special General Meeting will be held at the same place, for the purpose of electing a director in the room of George Minshaw Glascoot, Esq., resigned.—Every proprietor who may intend to be a candidate, or to propose any person as a candidate, must leave a notice in writing of such his intention, with the Secretary, at least fourteen days before the day of election, and exclusive of such day, and in such notice must be stated the name of the director, in whose place the proprietor proposes himself, or is proposed, for re-election. WM. LECKIE, Sec. 25, Austin-friars, Nov. 20.

TRETOIL MINING COMPANY.—The directors hereby give notice, that a SPECIAL GENERAL MEETING of shareholders of this company will be held on Monday, the 30th day of December instant, at One o'clock in the afternoon precisely, at the office of the company, 7, St. Mildred's-court, Poultry, for the purpose of electing two directors, to supply the present vacancies in the direction. Nominations of candidates (who must be shareholders duly qualified) are required to be sent in writing to the secretary, on or before Monday, the 23rd inst., no person will be entitled to vote at this meeting unless his name shall be duly registered as a shareholder in the books of the company. Forms of proxies may be had on application at the office, but no person can vote as proxy except a registered shareholder. By order of the Board, Tretoil Mining Office, 7, St. Mildred's-court, London. S. BUXTON, Sec.

CALLS.

CORNUBIAN LEAD AND SILVER MINE, in the parish of Perranzabuloe, county of Cornwall.—The directors hereby give notice, in pursuance of a resolution unanimously passed at the Half-Yearly General Meeting of the shareholders in the above Mine, held this day at the London Inn, Devonport, that unless the Fourth Instalment of Ten Shillings per share, made in June, 1839, be fully paid up within thirty days from this date (at the London and Westminster Bank, London; The Western District Bank, Truro; The Western District Bank, Devonport or Plymouth), the MINE and MATERIALS will immediately be SOLD to pay the present liabilities. By order of the board of directors, (Signed) ROBERT LAWS, Secretary. Devonport, Dec. 9.

DIVIDENDS.

HOLMBUSH MINE.—The directors hereby give notice, that a DIVIDEND OF ONE POUND per share will be paid at the office of the company on Thursday, the 26th instant, and on the following Thursdays, between the hours of Twelve and Three o'clock.—The scrip certificates must be left on the preceding Tuesdays. New Broad-street, Dec. 4.

NATIONAL PROVINCIAL BANK OF ENGLAND.—The directors of the National Provincial Bank of England do hereby give notice, that a DIVIDEND, at the rate of FIVE PER CENT. per annum, for the half-year ending the 31st instant, will be payable on the company's stock on and after Monday, the 18th of January next, when the dividend warrants may be obtained on application at the company's office. The transfer books will be closed from the 26th instant until the dividends become payable. By order of the court of directors, DANIEL ROBERTSON, Agent and Manager. 13, Austin-friars, London, Dec. 10.

BANK OF SOUTH AUSTRALIA.—The directors of the South Australian Company receive DEPOSITS of MONEY in London, and grant LETTERS of CREDIT, or drafts at thirty days' sight, payable (in cash or notes at the holders' option) at their Bank at Adelaide; the premium or charge is 1 per cent. Should immediate cash be wished, their bank will discount the drafts at the current rates. The Company are ready to take bills upon South Australia. Their Bank will also collect bills or monies in the Colony, upon a commission of 2½ per cent., and remit the proceeds to England. Apply at the company's offices, 4, New Broad-street, London. EDMUND J. WHEELER, Manager. N.B. Settlers having pecuniary transactions in town prior to departure, will find the Company's London Agency deserving attention. Full particulars can be had at their offices as above.

EASTERN COAST OF CENTRAL AMERICA COMMERCIAL AND AGRICULTURAL COMPANY. Capital £200,000, in Debentures of £20 each. The first series bearing interest at 4 per cent., payable half-yearly.

DIRECTORS. P. H. Abbott, Esq., Capt. P. D. Bingham, R.N., Charles Bourjot, Esq., John Dawson, Esq., William Hood, Esq., Adam Murray, Esq., David Pollock, Esq., G.C., John Spurgin, Esq., M.D. With power to add to their number. SECRETARY—Philip D. Souper, Esq. CASHIER AND ACCOUNTANT—L. S. COKE, Esq. SUPERINTENDENT—Young Anderson, Esq. BANKERS—Messrs. Glyn, Halifax, Mills, and Co.

CALL OF ONE POUND PER DEBENTURE ON THE FIVE THOUSAND DEBENTURES ISSUED.

The directors having resolved that an Instalment of ONE POUND per Debenture, payable on the 1st of February, 1840, be CALLED for on the First Series of Debentures, numbered 1 to 2000 inclusively, the proprietors of such debentures are hereby required to pay the sum of £1 on each of their respective Debentures, at the offices of the company, No. 60, Moorgate-street, Bank, on or before the said 1st day of February, 1840. If the call be not paid, the debentures become absolutely FORFEITED. By order of the directors, PHILIP D. SOUPER, Sec. 60, Moorgate-street, Bank, Dec. 13.

EASTERN COAST OF CENTRAL AMERICA COMMERCIAL AND AGRICULTURAL COMPANY. Capital £200,000, in Debentures of £20 each. The first series bearing interest at 4 per cent., payable half-yearly.

DIRECTORS. P. H. Abbott, Esq., Captain P. D. Bingham, R.N., Charles Bourjot, Esq., John Dawson, Esq., William Hood, Esq., Adam Murray, Esq., David Pollock, Esq., G.C., John Spurgin, Esq., M.D. With power to add to their number. SECRETARY—Philip D. Souper, Esq. CASHIER AND ACCOUNTANT—L. S. COKE, Esq. SUPERINTENDENT—Young Anderson, Esq. BANKERS—Messrs. Glyn, Halifax, Mills, and Company.

Notice is hereby given, that the following DEBENTURES of the Eastern Coast of Central America Commercial and Agricultural Company, numbered respectively, as under, having been forfeited, by reason of the non-payment of the Call of £1 on each Debenture, made by the directors of the company on the 3d of June last, and payable on the 1st of July last, the same will be offered for SALE by Public Auction, by Messrs. SHUTTLEWORTH and SONS, agreeably to the terms of the said Debentures, and the numbers of the said Debentures will be cancelled in the books of the company, and new ones will be issued to the purchasers to supply their place, in pursuance of the powers given to the directors for that purpose. The sale will take place at the Auction Mart, Bartholomew's-lane, on Friday, the 10th day of January, 1840, at Twelve o'clock at noon. By order of the directors, PHILIP D. SOUPER, Sec.

Numbers of the Debentures referred to, viz.—
No. 1 to 145 both inclusive, £730 to £734 both inclusive.
221 to 263 " 2790 to 2834 " 2642 to 2686 " 2915 to 2959 "

STANNARIES OF CORNWALL.

IN THE VICE-WARDEN'S COURT. JAMES POLGLASE & THOMAS AND ANOTHER. JOHN POLGLASE & SAME.

WHEREAS the Vice-Warden did, on the 13th day of November instant, Decree (amongst other things), that a SALE be made of the Tin Ores, and (if necessary) the Machinery and Materials upon and belonging to EAST DING DONG MINE, in the parish of Madron, within the said Stannaries, under the direction of the Registrar of the Court, and that the proceeds of such Sale should be applied by the said Registrar in the manner directed by the Decree in the above consolidated causes.

Notice is hereby given, that, pursuant to the said Decree, a PUBLIC AUCTION will be held at EAST DING DONG MINE aforesaid, on Wednesday, the 19th day of December next, at Eleven o'clock in the forenoon, for selling, either together or in lots, a new Water-Wheel, of 15 feet diameter, 2½ feet breast, a new 6 head stamps, a Horse Whim, Horse Whim Chain, Horse Whim Kibbles, Winze Kibbles, Winze Tackle, Shaft ditto, four 6 feet 9-inch Pumps, Sheds, Ladders, Smiths' and Miners' Tools, Smiths' Bellows, Anvil, Counting-House Furniture, &c. &c. For viewing the same, application may be made at the mine, and for further particulars (if by letter, post-paid) to Mr. Gillson, solicitor for the plaintiffs, Truro. Dated 29th November, 1839.

VALUABLE MINE AND MINING MATERIALS.

TO BE SOLD BY AUCTION, by MR JAMES TROTTER, on Friday, the 20th day of December instant, at One o'clock precisely, at the Clarendon-rooms, South John street, Liverpool, all the Right, Title, and interest in the LEASE of that valuable MINE, called the "EAST MUBERRY HILLS," situated in the parish of Llanivet, in the county of Cornwall, together with the MATERIALS thereon, consisting of an excellent Steam-engine, with boilers, &c., in very complete order, twenty-eight stampheads complete, twenty-two fathoms of pumps, a tramway, a quantity of timber, and a great variety of mining materials. The engine-house, counting-house, carpenter's shop, and smithy are recently erected, and in excellent order. The Mine is held under a lease of twenty-one years from the 24th of January, 1837, and the property is in every respect particularly deserving the attention of parties interested in mining. The Steam engine and other Materials may be inspected at the mine (about four miles from Bodmin); and, for further particulars, apply to Mr. Thomas Prout, Truro; to Mr. William W. Mortimer, Birkhead, or South Castle-street, Liverpool; or to the Auctioneer, at his rooms, Whitechapel, Liverpool.

VALUABLE ESTATES, COAL MINES, AND COLLIERIES.

TO BE SOLD BY AUCTION, at the ROE BUCK INN, in Newcastle-under-Lyme, on Thursday, the 13th day of February next, at Twelve at noon, all those FREEHOLD ESTATES, situate at and near Talk on the Hill, in the county of Stafford, called the WOODSHUTTS and HOLLINS ESTATE, and the HARDING'S WOOD ESTATE, in the parishes of Audley and Wolsanton, containing in the whole about 313 acres, together with the extensive MINES OF COAL AND IRONSTONE, and all other Mines and Minerals under the same, and also under other estates and waste lands thereto adjoining.

On the Woodshutts and Hollins Estate a most profitable colliery is now open and at work, with markets both by land and by the canal, for any quantity of coals that can be raised; and further works might immediately be opened, with great and certain advantage, on several mines of most superior house-fire coal (usually known by the name of Nabs or Nansbury coals) not yet touched.

These properties, which are divided into sundry eligible farms, with commodious farm houses and buildings, comprise, besides a capital MESSAGE or MANSION-HOUSE, called WHITE-HALL, with spacious offices and out-buildings, &c., a large and valuable Water Corn Mill, a considerable number of Cottages for workmen, large and convenient Wharfs on the banks of the Grand Trunk Canal, with railroads, powerful water-engines, and all other machinery and implements for getting and raising Coals; weighing machines and offices, carpenters' and blacksmiths' shops, boat docks and canal boats, and every thing appertaining to an extensive Colliery, in the most complete order.

The present get of the Woodshutts and Hollins Collieries may be taken at 600 tons a week, which might be easily increased to double or treble that quantity; and in addition to the advantages which the landed property and mines already possess, in being situate at the junction of the Macclesfield Canal with the Grand Trunk, and intersected nearly a mile by the one, and half a mile by the other, the intended railway from Manchester to Birmingham passing through the Collieries, and the contemplated extension of the Chester and Crewe Railway to Harecastle, present not only the prospect of a greatly extended sale of coals in the most flourishing districts of Lancashire and Cheshire, but also the opportunity of establishing on the said property, docks, warehouses, or works of any description.

These estates are situate about five miles from Newcastle-under-Lyme, three from the London and Manchester Railway, and six from the Grand Trunk Canal, and six from Congleton; and both the great roads from London to Manchester and Liverpool, through Newcastle-under-Lyme, and through the Staffordshire Potteries, pass through the estates; and the former diverges at a point extremely favourable for the erection of a good inn. In every point of view, therefore, a great and rapid improvement may be reasonably expected in the whole of this property.

For further particulars apply to G. A. McDermott, Esq., Chesterton; or to Messrs. T. and J. W. Ward, Solicitors, Newcastle-under-Lyme.

SUNDRY STEAM-ENGINES FOR SALE, BY PRIVATE CONTRACT.—VIZ.:

One 63-inch Cylinder ENGINE, without Boiler.
One 26-inch do. do.
One 26-inch do. do.
One 30-inch do. complete.
One 18-inch do. do.
One 36-inch do. do.

And sundry MINE MATERIALS. Application to be made at the office of the late Thomas Teague, Esq., or to Capt. Wm. Tunkin, Redruth.—Dated Redruth, Nov. 5.

TO MINERAL PROPRIETORS IN COAL AND IRONSTONE.—An opportunity now offers for receiving a YOUNG GENTLEMAN wishing to LEARN PRACTICALLY the ART of MINING and MANUFACTURING IRON, together with the CIVIL ENGINEERING and MECHANICAL DEPARTMENTS necessary for such establishments, with whom a LIBERAL PREMIUM will be expected.—For particulars, all letters (post paid) addressed to "J. C. M.," at the Editor's Office of this Journal, will be duly attended to.

TO COAL-OWNERS, MINERS, RAILWAY CONTRACTORS, EXCAVATORS, &c.—HALL'S PATENT HYDRAULIC BELT, or WATER ELEVATOR.—By this simple, efficient, and economical invention, which has many advantages over pumps of every description, water is raised and discharged in a uniform and continuous stream, at any required elevation. The work produced, in proportion to the power applied, is much greater than in the case of the ordinary pump of the best construction. The apparatus is now at work on the premises of Messrs. Eveleigh and Neave, Greengate, Salford, where it may be inspected any day, from nine to ten o'clock in the morning, and from three to four in the afternoon; also at Mr. H. B. Bury's, Salford, and at the works of Messrs. Hall, at the Tunnel, on the Manchester and Sheffield Railway, at Salford. A working model can be seen at the King's Arms, King-street, Manchester, where Mr. Hall will give every requisite information.

CHESTER AND CREWE RAILWAY.—TENDERS FOR LOANS.—The directors of this railway are prepared, under the powers in their Act of Parliament, to take up Loans of Money on Mortgage of the Tolls arising therefrom, in sums of not less than £200, and to remain for three or five years, as may be agreed upon, for which interest at the rate of 4½ per cent. will be paid half-yearly. Tenders, stating the amount, to be addressed to Mr. R. L. Jones, the Treasurer, at the company's office, Post-office-place, Chester. J. UNICKE, Chairman.

THE PATENT SAFETY FUSE. FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the safest, cheapest, and most expeditious mode of effecting this very hazardous operation. From many testimonies to its usefulness with which the Manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c. &c. "I am very glad to hear that my recommendations have been of any service to you. They have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, RICKFORD, SMITH, and DAVEY, Camborne, Cornwall.

THE THAMES TUNNEL IS OPEN TO THE PUBLIC every day (except Sunday), from Nine in the morning until dark. Admission One Shilling each. Entrance near the Church at Rotherhithe, on the Surrey side of the River. The Tunnel is now upwards of 1000 feet in length, brilliantly lighted with Gas, and is completed to within 140 feet from the Wharf-wall, Wapping. By order, J. CHARLES, Clerk to the Company. Thames Tunnel Office, Walbrook-buildings, Walbrook, Dec.

N.B. Conveyances to the Thames Tunnel, by Omnibuses, from Fleet-street, Charing-cross, Fleet-street, and Greenwich-street; also by Steam-boats, at Chiswick, Vauxhall, Westminster, Hungerford, Quornhithe, Dyer's-bell-wharf and London-bridge.—Books with plates descriptive of the works are sold at the tunnel, price one shilling.

ANTHRACITE ON RAILWAYS.—The following information respecting the performance of some American Locomotive Steam-Engines, built expressly for the use of ANTHRACITE COAL, has been received by the Committee of the "Anthracite Association of South Wales," who, assured by actual experiment, that this Coal possesses a calorific power over any other of 33 per cent. at the very lowest computation, take leave to submit it to the consideration of Railroad Boards and Engineers, with a view to fixing their attention on the great economy, freedom from smoke, regularity of supply, and other important advantages that must result from the adoption of

ANTHRACITE COAL IN LOCOMOTIVE ENGINES. Extract of a Letter from Messrs. Eastwick and Harrison, dated Philadelphia, 6th August, 1839.

"At your request, we beg leave to offer the following statement in relation to Locomotives manufactured by us for burning Anthracite Coal.—We have made for the Beaver Meadow Railroad three six-wheel engines of about eight tons weight, and one eight-wheel engine of eleven and a half tons. We have furnished the Hazleton Railroad (which is a branch of the Beaver Meadow Railroad) with one six-wheel engine of eight tons, and two eight-wheel engines of twelve and a half tons. We have constructed for the Sugar Loaf Railroad (which is a branch of the Hazleton Railroad) two eight-wheel engines of twelve and a half tons. We have also furnished the Danville and Pottsville Railroad with two six-wheel engines of eight and a half tons weight. All of the abovementioned engines have used Anthracite Coal as fuel exclusively, from the periods at which they were respectively placed on the roads mentioned, and are at this time in daily operation with that fuel, after the fire is kindled in the morning. They have been furnished to the respective Companies mentioned, at intervals from the autumn of 1838 to the present time. We are now filling orders for eight-wheel engines for the Philadelphia and Reading Railroad, and for the Baltimore and Ohio Company, which engines we guarantee to burn Anthracite Coal."

Extract of a Letter from Mr. George Jenkins, Superintendent of Transportation on the Beaver Meadow Railroad, dated Pottsville, January 16, 1839.

"The engines, 'Ella Rip,' and 'S. D. Ingham,' were placed on the road during the summer of 1838, but did not commence using coal until the latter end of the autumn of that year. The 'Quakake' was constructed for burning coal, and placed on the road in the spring of 1837—all three being six-wheel engines. The 'Beaver' is a larger and heavier engine, with eight wheels, and has used coal ever since it was placed on the road in the month of August last; all the engines have continued to burn Anthracite Coal, when running on the road, ever since they commenced the use of that fuel at the times above stated. We do not find the use of wood necessary, except for kindling in the morning previous to starting, and there is no difficulty in keeping up an abundance of steam without its aid. As nearly as we can ascertain, 120 lbs. of coal per trip is consumed in the six-wheel engines from Black Creek to Pottsville and back, a distance of forty miles; and for the same distance with the eight-wheel engine with double the load, 1800 lbs."

Extract of a Letter from Samuel D. Ingham, late President of the Beaver Meadow Railroad, dated Beaver Meadow, August 15th, 1838.

"The 'Beaver' continues to perform well. After ascertaining what she can do to the best advantage, we have limited her ordinary load to thirty-five cars up the Lehigh, and up the Quakake to twenty-five. She can do more by five cars, but the labor is too severe for constant use—a crew should not be required to exert all his strength often. She burns Anthracite Coal with perfect facility. She stood one hour on the road for repairing a rail without letting out the fire. I have passed up and down with her, and saw her ascending with thirty-eight cars, blowing off steam most of the way and the fire door open. I intend to supply the engines with small Anthracite Coal, and keep account of what they burn, as soon as we can make the necessary fixtures."

Extract from a Report of the Lehigh Coal and Navigation Company, dated 14th January, 1839.

"The experience of Messrs. Garrett and Eastwick, of Philadelphia, in successfully using Anthracite Coal in their Locomotive Engines, has received additional confirmation during the past year on the Columbia Road, and on the Sunbury Branch of the Danville and Pottsville Railroad, on which they have used no other fuel for several months past in drawing their coal. The Beaver Meadow Company and Hazleton and Laurel-hill Company have their Locomotives in use, all burning Anthracite Coal exclusively."

Copy of a Letter from J. L. Neubold, President of the Sugar Loaf Coal Company. "Messrs. Eastwick and Harrison have made two Locomotive Engines for the Sugar Loaf Coal Company the present year, one of which has been in operation for some time, using Anthracite Coal for fuel. It has given entire satisfaction, and no difficulty has been experienced in generating sufficient steam with coal. Having witnessed for several years the use of this fuel in the Locomotives on the Beaver Meadow and Hazleton Roads, I have no hesitation in giving it as my opinion, that for efficiency and economy, it is superior to wood. The Locomotives built by these gentlemen are highly finished, and we consider them in every respect equal to any that are made in this country."

(Signed) "JOHN L. NEUBOLD, President."

"Office of the Sugar Loaf Coal Company, Philadelphia, Aug. 6, 1839." Copy of a Letter from Jos. H. Dullis, President of the Beaver Meadow Company. "Messrs. Eastwick and Harrison having requested a notice of the use of Anthracite Coal in Locomotives made by them, it gives me pleasure to say, that in four engines built by them and the predecessors of the present firm, for the Beaver Meadow Company's Road, Anthracite Coal has been used for the last three years with entire success and satisfaction, and that no difficulty is found in driving them fully with the use of that fuel."

(Signed) "JOSEPH H. DULLIS, President."

"Office of Beaver Meadow Railroad Company, Philadelphia, Aug. 5, 1839."

Extract of a Letter from A. Pardee, Jun., Esq., Engineer of the Beaver Meadow Railroad, relative to the construction of the Road, and the performance of the Anthracite Locomotive Engines thereon, dated Hazleton, Philadelphia, June 9th, 1839. "The shortest curve on the Beaver Meadow Railroad has a radius of 300 feet; length about 200; but at the foot of the inclined plane there is a curve, around which the engines now daily pass; the radius of which is 350 feet, the length about 300. The heaviest grade is ninety-six feet per mile, at two points, about three quarters of a mile each; there is an average grade of eighty feet per mile for five miles; on the heaviest grade the shortest curve is 500 feet radius, the length about 400 feet. The heaviest grade on the Hazleton Railroad is 140 feet per mile for one mile and a half; this part of the road was not intended when made for the use of Locomotive power, but it was found in practice that, by doubling the trips, we could use the engines with more economy than horse-power. There are now in use on the Beaver Meadow and Hazleton Railroads, seven locomotive engines with horizontal tubular boilers, in which Anthracite Coal is exclusively used as a fuel after the first fire in the morning; and that we continue to use it when we have wood for the cost of cutting, is sufficient evidence that we find it to our advantage." (Signed) "A. PARDEE, Jun."

The Committee on Science and the Arts, constituted by the Franklin Institute of the State of Pennsylvania, to whom was referred for examination Messrs. Eastwick and Harrison's Locomotives, report—

"That these Engines possess two peculiarities of an important character; one in the arrangement of the driving wheels, and the other in the mode of maintaining the fire draft."

"The peculiarity in the means of maintaining the fire draft, is an apparatus for equalizing the effect of the exhaust steam in the smoke stack, somewhat similar to Galloway's contrivance. "Instead of exhausting directly into the stack, the exhaust steam enters two copper chests, one connected with each cylinder, and escapes from these into the chimney through a number of small tubes. With the aid of this contrivance, the Anthracite fire is kept in a state of intense activity, and generates an abundance of steam without the annoyance and danger arising from the smoke and sparks of a wood fire. The heat of the Anthracite fire has been found so great as to melt down the grate bars of cast iron, which were used in the first experiments with this fuel. Messrs. E. and H. have since substituted grooved wrought-iron bars, which are protected from the action of the fire by a coating of clay placed within the grooves."

"A trial of one of these engines on the road between Broad street and Peter's Island, was witnessed by several members of the Committee, on the 35th of April last. It happened, unfortunately, on that occasion, that the business of the road did not furnish so many cars as were desirable for a fair experiment. The particulars, so far as made known to the Committee, were as follows:—

Weight of engine, 26,550 lbs.	Weight on drivers, 18,000 lbs.
Cylinders, 12 inches diameter.	Steam, 90 lbs. to square inch.
Length of stroke, 15 inches.	Driving wheels, 44 inches diameter.
The train consisted of thirty-two loaded cars, estimated to be about 1600 tons. Two empty cars, weighing 9000 lbs., and tender, five tons; making a total of 1615 tons. This train was started with great ease on a rising grade of twenty-seven feet to the mile, and drawn to the foot of the inclined plane, the distance being about three miles, partly on a rising grade of thirty-five feet to the mile, with several short curves, and the road in such bad condition as to keep the sustaining beam in continual vibration. A few days after this experiment, one member of the Committee had an opportunity of witnessing a more decisive trial of the power of the engine. On the latter occasion, the train consisted of thirty-four single cars, estimated at five tons each; four double cars, ten tons each; one of Mr. A. Longberry's iron loads of fifty tons, and the tender five tons. Total, 265 tons. This train was started without difficulty on the same rising grade of twenty-seven feet to the mile, and drawn over the thirty-five foot ascending grade and short curves with apparent ease, and with steam blowing off during the whole trip. The satisfactory character of the experiments detailed above is sufficient to enable any one who is conversant with transportation on railroads to form a correct opinion of the merits of this engine. The impression of those members of the Committee who witnessed the trials, is, that it is well adapted for the use of Anthracite as fuel, and for a very heavy draught."	

By order of the Committee, "WILLIAM HAMILTON, Secretary."

"May 9, 1839." The Committee of the "Anthracite Association of South Wales" will be happy to afford to any communication that may be addressed to them on the use of Anthracite generally, which communication it is requested, may be addressed to Thom. Pritchard, Esq., Secretary of the Association, Postcardinal, near Swansea. Postcardinal, Oct. 25.

* The firm was at that time Garrett, Eastwick, and Co.

LAW INTELLIGENCE.

MR. BETHAM'S LAW CHARGES.

COURT OF CHANCERY—DEC. 9.

COOKE v. BETHAM.—This was a motion, by way of appeal, against an order of the Vice-Chancellor, which directed an injunction to restrain an action at law. The action was brought by Mr. Betham, as agent and solicitor for an unsuccessful railway company, and the trial was resisted on the ground that the subject of it involved very complicated and mutual accounts. Mr. WAKEFIELD and Mr. KEENE contended against the injunction, denied the mutuality of accounts, and deprecated the delay of taking them in equity.

Mr. WIGRAM, Mr. JACON, and Mr. LLOYD, for the plaintiff, insisted on the fiduciary character of Mr. Betham, and that this court alone could do justice between the parties.

The LORD CHANCELLOR said, if he sent the case to law, it must of necessity be referred. At the same time no case had been quoted in which equity had intervened merely upon its appearing that the accounts were complicated. The injunction could not be continued without payment of money into court, and the parties had therefore better arrange the mode of trying the liability of the defendants, which was disputed, and then return to this court.

HULL AND SELBY RAILWAY COMPANY.

VICE-CHANCELLOR'S COURT—DEC. 9.

BELL v. THE COMPANY.—The VICE-CHANCELLOR was occupied during the whole of the day in hearing the arguments of counsel in this case, in support of a motion made on behalf of the defendants to dissolve an *ex parte* injunction which the plaintiff had obtained in July last, restraining them from proceeding any further in the prosecution of their works upon that portion of the fore shore of the river Humber, which runs in front of a wharf belonging to the plaintiff, who carries on an extensive pottery business, until they (the defendants) should have first erected a new wharf in lieu of the plaintiff's present wharf, and one that should be equally convenient and commodious for the purposes of his trade. The details of the case presented no feature of public interest, the chief point in the case turning upon the construction to be given to the 69th section of the defendants' Act of Parliament, the question being whether the temporary jetty which the defendants had erected, in order to afford the plaintiff a communication between the river and the wharf, for the purpose of loading and unloading ships of merchandise, was such a structure as satisfied the requisitionists of the 69th section of the defendants' Act.

The arguments of counsel occupied the court the whole of two days. His Honour continued the injunction, and directed the plaintiff to bring an action, which should try his right at law, under the 69th section.

MIDLAND GRAND JUNCTION RAILWAY.

COURT OF EXCHEQUER—DEC. 9.

KERRIDGE v. HESSE.—Mr. JERVIS appeared with Mr. Compton for the plaintiff, and stated that his client brought this action to enforce from the defendant the payment of his salary for nearly two years as secretary to a provisional committee, of which the defendant was a member and chairman, established for the purpose of passing an Act to form a railway under the title of the Midland Grand Junction Railway, as well as certain sums of money which the plaintiff had laid out on behalf of the said committee in and about the performance of certain duties cast upon him by them, the whole amount claimed being about £600, the greater part of which was for the salary as secretary. In behalf of this case Mr. Armstrong was called, who stated that he had been the attorney for the committee, and that the plaintiff had acted during a certain portion of time, about a year, as secretary to it, that the work was done and expenses incurred, as stated by the learned counsel, to the amount claimed by the plaintiff.

Mr. M. D. HILL (with whom was Mr. Warren), in answer to this case, called Mr. Holmes, the engineer to the proposed scheme, from whose testimony it appeared, that the plaintiff, so far from having any claim for these services, had entered upon the office and had expended the money now claimed by him on an understanding expressed in a minute of the committee, and recorded in his own handwriting, that the members of the committee were not to be liable personally, but that he and others were to look for remuneration to the funds to be realised out of the shares when the company should be formed; besides which, there seemed to have been an arrangement between the plaintiff and the witness, that the former should advance the sum of £100, out of his own pocket towards the expenses of his own office and the necessary furniture. He, however, appeared, that a bill of exchange had been drawn and accepted among the members of the London committee, and discounted by Hesse, who had endorsed it as a fund out of which to defray certain expenses, including, among others, some of the plaintiff's.

Mr. JERVIS having replied, Mr. Baron ALDERSON left it to the jury to say what were the terms on which the plaintiff had accepted the office. If they should think that his services were to depend for their remuneration on the future success of the scheme, then, as for that part of the claim which had been reduced in the evidence as against the defendant to a single quarter, the verdict ought to be for the defendant; and if so, then it was very likely that the same bargain had been made about the expenses, and that they also were to be borne by the plaintiff himself until there was any fund raised by the sale of shares out of which he might be paid. If, however, the jury should be of opinion that the plaintiff was entitled to sue for his salary, it would follow *a fortiori* that he ought to have the expenses repaid him which he had been put to in the country and elsewhere in the concerns of the speculation.

The jury, after a short deliberation, found a verdict for the defendant.

DISPUTED CLAIM FOR WHARFAGE.

COURT OF EXCHEQUER—DEC. 10.

STAPLETON v. NOEL and OTHERS.—Mr. JERVIS and Mr. BRAMWELL appeared for the plaintiff, who is a wharfinger, and sought to recover from the defendants, who were contractors for some part of the London and Birmingham Railway, a large sum of money alleged to be due from them for the wharfage of a large quantity of iron and trucks left on his premises for more than a year, and at last removed by them.

Mr. PLATT and Mr. WATSON conducted the defence, and after a protracted inquiry, during which no one witness seemed to come exactly up to the mark required by the plaintiff.

His LORDSHIP directed a nonsuit to be entered, being of opinion that no joint contract had been proved against the two defendants.

MIDDLETON HILL LEAD MINES.

VICE-CHANCELLOR'S COURT—DEC. 11.

RYAN v. HILL.—The arguments in this case were brought to a conclusion to-day. The object of the suit was to have an account taken between the partners of certain lead mines at Middleton-hill, in Montgomeryshire, under the direction of the Court.

The plaintiff, who had been a shareholder, and had acted as manager of the mines, had entered into contracts for his shares with the company of such a nature as rendered the accounts between the parties, from the relation they stood to each other, very complicated. The argument did not raise any question of general interest.—His Honour reserved his judgment.

TRANSPORT OF COALS ON AMERICAN RAILROADS.—During the week, ending on Thursday last, 2269 tons of coals were transported on the Mount Carbon Railroad—the total this season, 72,237 tons; 1050 tons were transported on the Mill Creek Railroad—total for the season, 42,633 tons; 2229 tons on the Schuylkill Valley Railroad—total, 63,387 tons; 5600 tons on the West Branch Railroad—total 142,245 tons. The Lehigh coal trade for the week ending the 17th ult. amounted to 7528 tons, in 172 boats—total this season, 200,276 tons, and 4592 boats.—*American paper.*

GLoucester and Berkeley Canal.—An adjourned general meeting of the proprietors will be held at the office, in this city, on Wednesday, the 18th inst., to take into consideration the reply of the Exchequer Loan Commissioners to the proposition of the company for paying off the Government debt. That reply, we are sorry to say, is not so satisfactory as could be wished, and as might reasonably and justly be expected. It accedes to the proposition for calculating the rate of interest on the loans at 3½ per cent. to the date of 1st July, 1849; after that date the interest to be at the rate of 4 per cent. That on the payment of 60,000, on 1st July next, further time be granted for the liquidation of the balance, of which 60,000, is to be paid in ten years, and the remainder in the course of a second ten years. But the Government will not give up possession of the works till the whole debt is paid, nor will it permit any of the income of the canal to be applied for the benefit of the old shareholders till the Government debt is completely liquidated. The 3 per cent. preference shareholders, who came forward with the proposed instalment of 60,000, are of course to be paid interest on their shares, but the surplus income beyond this and payment of the expenses of management, it is demanded, shall form a sinking fund for the settlement of the Government debt, having the original shareholders for twenty more years without any return for their capital. These certainly are hard conditions, and little creditable to the justice or liberality of the Exchequer Loan Board.—*Gloucester Journal.*

REVENUE AND PROFITS OF BRITISH RAILWAYS.

The revenue and profits derived from the working of the Liverpool and Manchester line in each half-year, from the beginning of 1836 to the 30th of June, 1839, have been as follows:—

Half-year ending	Revenue.	Profits.
30 June, 1836	£109,555	£39,407
31 Dec. " "	125,280	45,651
30 June, 1837	105,951	35,762
31 Dec. " "	120,048	47,149
30 June, 1838	123,610	46,556
31 Dec. " "	136,693	55,714
30 June, 1839	123,814	45,211

The increase in 1838 over the receipts of former years is remarkable. There was but little difference between the two preceding years, but the traffic of 1838 shows an advantage over either of those years to the extent of 20 per cent., and the revenue of the first half of 1839 has more than kept pace with the corresponding portion of 1838.

The Grand Junction Railway between Birmingham and the Liverpool and Manchester line at Newton, opened on the 4th of July, 1837, since which time the half-yearly receipts have been:—

To 31 Dec., 1837	Revenue.	Profits.
30 June, 1838	£116,740	125,130
31 Dec., 1838	178,039	473,714
30 June, 1839	191,936	96,109

The great increase realised during the last twelve months must be in a great degree attributed to the opening through its full extent of the London and Birmingham line; but it has also partly arisen from the conveyance of merchandise, the arrangements for which could not be made for some time after the Grand Junction Railway was first opened.

The London and Birmingham Railway was opened for use through its whole extent only in September, 1838. The receipts during the first six months of 1839 have amounted to 270,814, and the profit, after deducting all the charges, and reserving 14,000, for depreciation of stock, was 168,874. The gross receipts since June have been at a much higher rate, so that the aggregate of the second half of 1839, if the traffic proceeds at an equal rate throughout the year, will exceed 370,000. The completion of the various lines now in progress, which will perform the part of affluents to this railway, must still further augment its revenues; but without waiting for the opening of these lines, the present rate of traffic proves equal to that which was put forward in the estimates of the projectors; and such is the steady rate of progression which has hitherto been experienced in the amount of the traffic, that it seems not unreasonable to expect that the actual revenue will in time bear as favourable a proportion to the actual cost of the undertaking as the estimated revenue bore to the estimated cost of construction.

It has been made a ground of reproach against the professional gentlemen, by whom estimates of many of our railway undertakings were formed, that the actual outlay has so enormously outrun their anticipations. That this should have been the case should not be very surprising. There is always a tendency to underrate the probable costs of works projected on a large scale, even in those cases where ample experience has been afforded; in the cases under our present consideration, there could be no aid derived from experience, and many sources of expense might, therefore, easily escape the most cautious calculator. On the other hand, it is on every account satisfactory to know, that in all the important railway undertakings that have hitherto been sufficiently tested, the estimates of revenue formed by the projectors, proverbially a sanguine race of men, have been far exceeded. The estimated revenue on the Liverpool and Manchester line was 62,500, and it has been shown that, in the year 1838, the receipts amounted to 260,303. On the Newcastle and Carlisle line, the estimated revenue was 28,000, while the receipts, in 1838, were 61,255.

The number of passengers conveyed along the various lines that have hitherto been made available for travelling has been far beyond what was expected by the most sanguine. Great as it has been, however, there is good reason for believing, from the evidence afforded by the amount of railway travelling in Belgium, where the inducements to locomotion are not nearly so cogent, as they are in England, but where very low rates are charged for the conveyance of passengers, that if the fares were materially lowered in this country, not only would the amount of travelling be increased out of all proportion beyond the rate of reduction, but that the revenue of the proprietors would be improved also. The instances that can be offered from the experience of our country in support of this view are not many. On the Manchester, Bolton, and Bury Railway, it has been found that a comparatively trifling abatement of the fares has been productive of a more active traffic and of increased revenue. Up to the 12th of July, 1835, the following rates were charged:—

Passengers in covered carriages	1st class, 2s. 6d. each.
Do ditto	2d class, 2s. 0d.
Passengers in open carriages	1s. 0d.

During the six weeks ending 12th of July, the number of passengers conveyed at these rates was 26,579, and the money paid by them 1911. 6s. 9d. The fares were then reduced as follows:—

In covered carriages	1st class, 2s. 0d.
Do ditto	2d class, 1s. 6d.
In open carriages (as before)	1s. 0d.

In the following six weeks the travellers numbered 35,126, and the fares paid by them amounted to 2129. 7s. 9d.

In the month of December following, the travelling in open waggon was discontinued, and the fare by first-class carriages was raised to 2s. 6d., that by second-class carriages being continued at 1s. 6d. The consequence of this further alteration may be seen from the fact, that, in the six weeks that preceded it, the number of passengers conveyed was 31,435, and the money received 1931. 0s. 6d. while in the six weeks that followed the increase, the number of travellers fell to 23,951, the money paid by whom was 2029. 16s. 6d.

On the Leeds and Selby Railway the fares charged in 1835 were, by first-class carriages, 3s., and by second-class 2s. per head, and the number of persons conveyed was 100,895. In 1836 the fares were raised to 4s. by first-class, and 3s. by second-class carriages, and the number of passengers was reduced to 88,957. In May, 1837, a further advance was made in the fares to 5s. and 4s. for the different kinds of carriages, and the number conveyed that year was only 70,625. This falling off occurred altogether after the raising of the fares, the number in the first four months of 1837 having been 1409 greater than in the corresponding portion of 1836. In 1838 the fares were again lowered to 4s. for first-class, and 3s. for second-class carriages; and the number of persons conveyed in the year was 90,637.

It will place these results in a stronger light to quote the following figures from the evidence given by the chairman of the Leeds and Selby Railway Company, before a committee of the House of Commons, in 1839.

Six months from May to October—	Number carried.	Money received.
1836	60,439	£940
1837	41,830	7650
1838	60,174	7892

The reduction of the fares, in 1838, has thus had the effect of raising the number of travellers to nearly the same level as before the advance of price, but has by no means brought back the revenue to its former amount, from which it would appear probable that the previous raising of the fares must have led to the adoption of the second-class carriages, and that this habit has since continued.

The following statement of the total number of passengers conveyed on various lines of railroad, in the year 1838, is taken from the second report of the committee of the House of Commons, appointed in April, 1839:—

Liverpool and Manchester	609,336
Grand Junction	448,290
London and Birmingham	459,385
London and Greenwich	1,544,266
Newcastle and Carlisle	196,051
Stockton and Darlington	228,946
Dundee and Newtyle	89,682
Durham and Sunderland	77,421
Edinburgh and Dalkeith	299,201
Garmir and Glasgow	128,378
Leeds and Selby	90,637
Leicester and Swannington	23,053
Paisley and Renfrew	143,180
Dublin and Kingstown	1,141,679
Bolton and Leigh	86,320

In the same report is given the traffic upon other lines that were opened in the course of 1838, as follows:—

Dundee and Arbroath	from 5 Oct. to 31 Dec.	18,967
Great Western	4 June to do.	370,992
Manchester, Bolton, and Bury	29 May to do.	227,727
North Union	29 Oct. to do.	22,739
Sheffield and Rotherham	31 Oct. to do.	82,175
South-Western	21 May to do.	316,172

The great increase in the number of passengers by railroad communication is one of the most encouraging features of the system. When the Liverpool and Manchester line was opened, in 1830, and passengers flocked to avail themselves of it, a great part of the travelling was said to be the result of curiosity and the love of novelty. This may, to some extent, have been the case, but different motives have since been productive of far greater results. The numbers conveyed upon it from its first opening to the 30th of June, 1839, were as follows:—

From 16 Sept. to 31 Dec., 1839	71,951
1 Jan. to 30 June, 1839	188,726
1 July to 31 Dec., 1839	350,321
1 Jan. to 30 June, 1839	174,122
1 July to 31 Dec., 1839	182,823
1 Jan. to 30 June, 1839	171,421
1 July to 31 Dec., 1839	215,071
1 Jan. to 30 June, 1839	200,676
1 July to 31 Dec., 1839	235,961
1 Jan. to 30 June, 1839	205,741
1 July to 31 Dec., 1839	268,106
1 Jan. to 30 June, 1839	473,947
1 July to 31 Dec., 1839	223,948

From this time, until the numbers for 1839 were called for by the committee of the House of Commons, no return of passengers has been made by the company, so that it is not possible to trace the progress of increase from year to year. Comparing 1835 with 1839, we now see that the numbers have increased in these three years from 473,947 to 609,336, or at the rate of 29½ per cent.; a result which must, in some degree, be attributed to the opening of tributary lines, during the interval, in which case the maximum number has not yet been attained.—*Companion to Almanac for 1840.*

MANCHESTER AND BIRMINGHAM RAILWAY.

On Thursday, the 5th inst., in accordance with a request made by Alderman Copeland, one of the representatives of Stoke-upon-Trent, a public meeting was held in the Town Hall of that borough, to consider what steps should be taken in reference to the projected railway from Manchester to join the Grand Junction Railway near Stafford, for which an Act was obtained some time ago. The recent suspension of the works on the proposed line, and the report that an arrangement had been made between the Manchester and Birmingham and the Grand Junction Companies, which was likely to cause the complete abandonment of the line through Congleton and the Potteries, led to the present meeting. The attendance was highly respectable, comprising nearly all the influential manufacturers of the district, and including a deputation from Congleton.

LEWIS ADAMS, Esq. (Chief Bailiff of Stoke), in the chair. Alderman COPELAND opened the proceedings of the meeting, by expressing the surprise and regret it occasioned him, after the strenuous support which he, in common with others, had given to the Extension line in Parliament, to learn, on his arrival in the Pottery district, in the early part of November, that a negotiation was on foot between the Grand Junction and the Manchester and Birmingham Railway Companies—that the line through the Potteries was to be altogether abandoned, and that the Grand Junction Company would support the Extension line from their own line at Cheby to Rugby—a line which they had so pertinaciously opposed in the last session. On making application to the chairman of the Manchester and Birmingham Railway Company upon the subject, he was informed, in reply, that it was quite true that an arrangement had been entered into to construct the branch to Crewe, but that this agreement did not fetter them with regard to a line through the Potteries. He (Alderman Copeland) was, however, of opinion, if the arrangement in question was once completed, it would be quite impossible for them to have a railway through the Potteries. The line, it appeared, was to be formed from Manchester to Crewe, at which place it would join the Grand Junction line, and that line was to be left again somewhere near Stone, and carried to Rugby, as if purposely to avoid the Potteries. He called upon the meeting to make a common stand against this coalition, which, it was said, had been come to by the Manchester Company in consequence of the depressed state of the money market and the indisposition which they felt under such circumstances to oppress their shareholders. The Grand Junction Company, it was true, were willing to give them a branch, provided they could make it appear that the Potteries would yield a compensating traffic. Such a branch as that, which was to be from Macclesfield, or some other point of the Grand Junction Railway, would not meet the wants of the Potteries. But even this was not to be made, unless a compensating traffic from the Potteries could be made satisfactorily to appear. In these undertakings he considered that it was enough to show that the Staffordshire Potteries would prove a great auxiliary to any main line of railway, and that their traffic would very much improve the finances of any company. He (Alderman Copeland) had taken some pains in the investigation of this subject. He held in his hand the Acts of Parliament already passed; he had submitted those Acts to eminent professional men, who had waded through them; and he was given to understand that there was nothing in the Manchester and Birmingham Act to compel the parties to form the line. Although, therefore, they had no power to compel them to carry the Act of Parliament into effect, they had power to remonstrate, and to tell these gentlemen that it was carried, and that they could not with the least degree of propriety and justice now leave them in the lurch. He ought, perhaps, to observe, that the two directors who had communicated with some of the Pottery gentlemen had expressed in strong terms their regret at the inability of the company to form the line through the Potteries. He had received a letter yesterday from the chairman of the Grand Junction Railway Company, saying that that company would be extremely willing to entertain a proposition from the Staffordshire Potteries, with the view of giving them a line of railway. Looking at the position in which the Potteries were now placed, and considering that an influential body of gentlemen were about to meet for the purpose of forming a company to carry the line down the Churnet Valley, and bearing in mind that sooner or later the Churnet Valley or the Trent Valley line must be formed, he thought it would be prudent on their parts to express most strongly and emphatically the opinion they entertained of the conduct of the Manchester and Birmingham Company in their attempt to abandon the Potteries, and of their expectation that they will yet carry into operation, in accordance with the Act they had obtained, the line through the Potteries. Whenever the Manchester and Birmingham Company went to Parliament for a bill to extend their time for purchasing land, he should not hesitate to endeavour to engraft on such a bill some clause to compel them to perfect their line through the Potteries. Should they abandon their intention of going to Parliament for that object, he would endeavour, if they applied for a bill for the Extension line, to obtain the insertion in that of the compulsory clause for the formation of the Pottery line. He (Alderman Copeland) never could believe that Parliament would sanction the attempt to form the Extension line, independently of the Pottery line; and, indeed, he thought the *locus standi* of the Extension line would be swept from under the feet of the applicants if they proposed to come to Crewe, and to leave the Grand Junction line at Cheby. He believed they would be found in a totally different position, and would meet with a very different reception if they applied to Parliament to sanction this scheme. He would only add one word in conclusion. He had searched for and found the opinion of Mr. Rastrick, the engineer, in 1836, in which he declared that the only line from Manchester to London must pass through the Potteries. That was the opinion of Mr. Rastrick also in 1839. The Manchester and Birmingham Railway directors had been of the same opinion, as also had the projectors of the Extension line; and it was only now to be abandoned on account of the peculiar state of the money market.

JOHN RIDGWAY, Esq., felt, notwithstanding the strong and paramount claims which the Potteries had on the Manchester and Birmingham Company for the formation of the line originally proposed, that their plea of commercial difficulties was, to a certain extent, a valid one, and he, therefore, doubted very much the expediency of pressing too hardly upon them at the present time. The ground was open to them to proceed whenever circumstances should justify their doing so; and he considered the best policy of the Potteries would be to lay upon them that firm pressure which would induce them to consider it their interest as well as their duty to set fairly by that important district. Mr. Ridgway concluded by reading a series of resolutions, which he submitted for the adoption of the meeting, requiring, on the part of the Manchester and Birmingham Company, the formation of their line through the Potteries as soon as practicable.

Mr. W. WARD (solicitor), secretary of the railway committee, then read a letter from Mr. Moss, the chairman of the Grand Junction Railway Company. The letter stated, in substance, that there was nothing in the arrangements made by the Grand Junction Company with the Manchester and Birmingham to prevent the Pottery line being made; that however the Potteries had reason to complain of having been the sport of rival companies, they had never been so treated by the Grand Junction Company, which had at the first offered them a branch line, and was still ready to make them one, but no more; this, in their opinion, being all that the traffic of the district would support. Mr. Moss, after alluding to the new friends of the Potteries, and of their desertion of them, went on to say that he had always considered the interest of the Grand Junction to be intimately connected with the Potteries, and that, although the company could not do all that was anticipated, they were ready to do everything that the country could reasonably expect, and immediately. In conclusion, requesting if the subject came under consideration, that his letter should be read to the meeting.

R. E. HEATHCOTE, Esq., instead of adopting the recommendation of Mr. Ridgway, preferred taking his stand on the ground of a firm resistance to an arrangement which he considered as a most injurious monopoly. His opinion was, that they should use every means in their power to get the Manchester and Birmingham Company to proceed with their undertaking; and, indeed, to insist on its completion. But it occurred to him, there was another way in which they might be met; and that was, to intimate to them,

that they would be obliged shortly, and, perhaps more than once, to come again before Parliament, and then those districts which had experienced such bitter disappointment at their hands, would make their appeal to that august body, who were the natural protectors of the interests of the country, and sure he was that they would indignantly discountenance parties who had taken up their time, day after day, in obtaining bills, ostensibly for the public benefit, which, when it suited their own private purposes, they threw overboard without any hesitation.

F. W. TOMLINSON, Esq., exhorted the meeting to take a strong and determined position in reference to the important subject before them, feeling convinced that if the Manchester and Birmingham Company made the Crewe line, the line through the Potteries would never be executed. Mr. Moss had offered to give them a branch line, but they would not have it—neither would it pay; and he was still more sure that it would never answer the just expectations of the public. His worthy friend, Mr. Alderman Copeland, had informed them, that there were no powers in the act to compel the company to form this line. There might be no substantive and specific powers, which he thought a great omission in such acts of Parliament. Though it was admitted there were no specific powers to compel the formation of the line, yet he doubted whether there were not powers, which might be applied to effect their object; whether the courts of law or equity might not effectually interpose to enforce the making of this line. Any gentlemen who might be appointed a committee must direct their attention to that subject. He would, above all, warn them against trusting to the notice which had appeared in the papers of an application to Parliament. If the directors did not get the power they sought their project would be extinguished. If delays were generally dangerous, in this case they would be fatal. He would advise the committee not to be amused by any promise or pledge, but to seek, by all possible means, to enforce the completion of the present line. If any new project were started, it would have many chances to contend against; there would be great delay, a year and a half's notice would be necessary, and even after all the formalities of obtaining an Act of Parliament the thing might be altogether abandoned. He would recommend that they should suggest no other plan, but confine these parties strictly to the line, for the formation of which they already possessed the necessary powers.

E. WOOD, jun., Esq., suggested the formation of a committee to wait upon the directors of the Grand Junction Company, and endeavour to show them that it was their interest to assist the Manchester and Birmingham Company in making their line.

Alderman COPELAND said it occurred to him that the London and Birmingham Company might be induced to assist in the formation of the present line, which would of necessity bring all the traffic from Manchester to the line of that company.

GEORGE WILBRAHAM, Esq. (one of the deputation from Congleton), said although the commercial depression which, unfortunately, now prevailed to so great an extent might be a reason for delaying the object for a while, or for not pushing it on with the rapidity which was desired, it could by no means exempt the company from the fulfilment of solemn pledges, which ought to have the same weight with honourable men as the strongest legal obligation.

The meeting was afterwards addressed by JOHN PICKFORD, Esq., who adverted to the strong feeling which existed in Congleton against the rumoured abandonment of the line, which would be equally injurious to the interest of Congleton and the Potteries; and resolutions were unanimously agreed to, urging the Manchester and Birmingham Company to carry their main line through the Pottery Valley, to which they stood pledged on every principle of policy, justice, and good faith.

A committee consisting of Messrs. R. E. Heathcote, H. Minton, J. Ridgway, W. Ridgway, Enoch Wood, jun., Wm. Davenport, and Robert Williamson, Esqrs., was then appointed to carry the resolutions into effect, after which, thanks were given to Alderman Copeland, the deputation from Congleton, and the chairman, and the meeting separated.—*Abridged from the Staffordshire Advertiser.*

RAILWAY INTELLIGENCE.

RAILROAD THROUGH CORNWALL.—(From a Correspondent).—We understand that this project has created a lively sensation at Lisbon, the English merchants eagerly seeking information respecting the progress being made by the committee in maturing plans, &c., and that shares to some extent have been requested to be engaged by anticipation. The merchants anticipate a revival of the old Lisbon trade, which existed in Falmouth in 1809, through the acquisition of this railroad. It is expected that as Oporto, Cadiz, and Gibraltar, will share in the same advantages, these important places will not hesitate to manifest the same encouraging spirit in aid of the undertaking.

SOUTH-EASTERN RAILWAY.—The rapid progress of the works on this line is giving quite a lively aspect to Folkestone. The bridge across the Canterbury and Dover road is also completed; and the advancement of the line on either side is going on in a highly satisfactory manner.—*Dover Chronicle.*

MANCHESTER AND BIRMINGHAM RAILWAY.—The second arch (sixty-three feet span) of the north abutments of this railway was struck on Monday, and only "settled" half an inch.

BRIGHTON RAILWAY.—Notwithstanding the late wet summer and autumn have materially retarded the progress of our railroad, the Shoreham branch is very nearly completed. The engine passed through the tunnel at New England for the first time this day at night, and took back thirty loaded waggons. On the following day no fewer than four accidents happened on the railroad. The first befel one of the policemen, named Wilson, the next to John Cate, a labourer employed on the line, the third to a fellow-labourer, named Stubbsfield, neither of whom were materially injured, but the fourth (B. Ashdown), brought from that portion of the works, in the parish of Clayton, expired soon after he reached the hospital. This is only the fourth out of thirty cases of accidents that have been received into the hospital that have terminated fatally.—*Brighton paper.*

GLOUCESTER AND BIRMINGHAM RAILWAY.—We have very little doubt but that this railway will turn out well. Everybody knows that the trade of Gloucester is vastly on the increase; her fine canal and spacious docks, crowded with vessels of every tonnage and from every country, afford clear indices of rapid commercial progress. The enormous increase of the iron trade in the district of which Birmingham is the centre, ensures an increase of commerce there, and hence will the Birmingham and Gloucester Railway form the medium of carriage between two of the busiest spots in England; and moreover into each end of which, whether from the north or the west, other lines pour their contribution of traffic. We believe that no line in England has been more economically or better constructed, and we look forward to its success as all but certain. We do not regard the present lowness of the shares, they will perhaps be lower still; for it is but rarely the public sees things in their proper light at first.

PENRITH AND CARLISLE RAILWAY.—At a meeting of the shareholders in the above undertaking, convened by advertisement, and held at the George Inn, Penrith, on Tuesday last, it was resolved that notice should be given to the owners and occupiers of land on the projected line of railway, of the intention of the company to apply for an Act of Parliament in the next session; and as a considerable majority have signified their intention to take a reasonable price for that through which it will pass, we have no doubt whatever that as the landowners generally will be benefitted to a great extent by the project, they will not allow private interests to contend against the public good. The committee appointed by the Lords of the Treasury, in consequence of the addresses to the House of Commons, on the 14th and 20th of August last, have requested the plans and sections of the line to be sent to them for inspection; and we have no reason to doubt, what will be their opinion on the subject; but if we take the Penrith and Carlisle as an independent line, in looking at the daily increasing traffic, the return of profit to shareholders, must in a short time be incalculable.—*Carlisle Journal.*

HAVANNA, OCT. 1.—The Spanish government offers the railroad for sale, from this city to Guines, fourteen leagues, with everything complete, for 3,000,000 dollars, with 6 per cent. yearly interest, and 3 per cent. on account of the capital as a sinking fund until the whole amount is paid, which will take thirty-three years. The government asks for the first three years only 222,200 dollars yearly, in order to pay some due from the road, and make some improvements therein. The road has yielded since December last, at 1000 dollars per day, say 365,000 dollars yearly. 9 per cent. on 3,000,000 dollars 270,000 dollars yearly, leaves for repairs, &c., 25,900 dollars. First three years 365,000 dollars, 1,095,000 dollars. The company has 222,200 dollars, three years 666,600 dollars. In favour of a company buying, three first years, 428,400 dollars. And so the 9 per cent. is not to commence until the fourth year, this sum of 428,400 dollars would be of much assistance to them in paying readily the 9 per cent., or negotiating these funds during the time.—*New York Journal of Commerce.*

PROCEEDINGS OF PUBLIC COMPANIES.

BIRMINGHAM, BRISTOL, AND THAMES JUNCTION RAILWAY, AND KENSINGTON CANAL.

The adjourned meeting of proprietors and others interested in these undertakings was held on Thursday, the 12th instant, at the British Coffee-house, Cockspur-street, Charing-cross.

A full report of the previous meeting, held on the 14th ult., will be found in the *Mining Journal* of the 16th ult., where also is given a description of the plans proposed by Mr. John White for completing and rendering productive these two works.

On the present occasion RICHARD LATHAM, Esq., was, on the motion of Mr. WHITE, called to the chair, and briefly opened the business of the day.

Mr. DOUGLAS, at the request of Mr. White, then read the resolutions passed at the previous meeting, which sufficiently explain the object of the adjournment. They were as follows:—

That this meeting is impressed with the necessity, at the present crisis of the affairs of the company, of requesting the directors thereof to lay before the proprietors at large, by Thursday, the 12th December next, a full, comprehensive, and detailed statement as to the mode in which they propose to carry forward and complete the railway and its communication with the River Thames, the situation and character of the stations proposed, the means of working the railway and the Kensington Canal, the nature of the establishment as to the servants to be permanently employed, and especially the arrangements for transferring goods, produce, and commodities from the Paddington Canal to the River Thames, and vice versa; also a perspicuous statement of the expense which will be incurred in effecting the above works, and of the probable annual amount which may attend the working, superintending, and maintaining the line, together with a detailed statement of the engagements and liabilities of the company, their means of meeting the same, and of the probable value of the lands, houses, and other property now belonging to the company, and whether the same have been wholly or partially paid for.

That the chairman be requested to communicate the resolution now adopted to the secretary of the company, accompanied by a desire that if the directors are not prepared with the information solicited, or disposed to submit it to the proprietors, they will be pleased to state their objections to the plan which has this day been laid before the meeting by Mr. White for its consideration.

That Mr. White be requested to submit his plan to the directors of the railway, and confer with them upon it, and afterwards report to an adjourned meeting of proprietors to be held here on Thursday, the 19th December next.

Mr. WHITE then stated that these resolutions had been communicated to the directors of the railway, and a correspondence had taken place between them and him on the subject.—This correspondence was read. The following letter was the concluding one:—

December 9, 1839.
DEAR SIR,—With reference to the plan submitted by you to the board on the 26th ult., and the details of which you have since done Mr. Hosking and myself the favour to explain, I am directed to inform you that, under existing circumstances, the board are not prepared to come to any decision upon the plan to be adopted.

I am, dear Sir, your most obedient servant,
JOHN THOMPSON, Secretary.

Mr. WHITE then re-stated his views, as formerly explained, and said everything that had occurred since the last meeting confirmed these views. The deep cutting near the Uxbridge-road was now full of water, and it would be almost impossible to form a railway there, whereas the canal might easily be extended, and would answer equally well. The Kensington Canal, although in an unfinished state, had within the last few months produced 400*l.* in tonnage dues. The ground which the company had bought at a low rate would become very valuable as frontage were the canal extended. He thought the directors were bound to lay before the proprietors of the railway and of the canal full explanations of what they intended to do, as they had called up the whole of the share capital, and were now seeking to borrow money. It was now for the meeting to consider whether they ought not to get up a legal requisition to the directors to call a meeting. He (Mr. White) had, in the first instance, thought it better to request them to do so, as he had no unfriendly feeling towards them. As, however, they could get nothing from the board but vague letters, he thought they ought to adopt other means. He begged, therefore, to move the following resolution, which was seconded by Mr. WHITE, jun.:—

That this meeting receives with great regret the communication of the directors, that they are not prepared to come to any decision upon the plan to be adopted for the completion of the railway.

Mr. CARPUS (a director) said, the books of the company were always open for the inspection of proprietors, and he could not see what good could result from the present proceedings.—Mr. GUNSTON (another director) said, the object of Mr. White was to have an explanation of what was to be done hereafter. He (Mr. Gunston) thought the meeting ought to take place.—Mr. WHITE said, the directors were not charged with improperly spending the money of the shareholders, and, therefore, an inspection of the books would be of little use.

Mr. CARPUS said, it was the want of money which prevented the board from proceeding. Their funds were exhausted, and, in the present state of the money market, they could not borrow further capital.

After some further desultory discussion, the resolution was carried unanimously.

Mr. WHITE then proposed the following resolution, which was seconded by Mr. GUNSTON, and carried unanimously:—

That in consequence of the directors not being prepared to come to any decision upon the plan to be adopted for the completion of the railway, this meeting deems it desirable that the following requisition be submitted to the board of directors:—“We, the undersigned, do hereby require the directors of the Birmingham, Bristol, and Thames Junction Railway, to call a special meeting of the proprietors of the undertaking, for the purpose of requiring from the directors a full, comprehensive, and detailed statement of the engagements and liabilities of the company, their means of meeting the same, and of the probable value of the lands, houses, and other property now belonging to the company, and whether the same have been wholly or partially paid for.”

Mr. THOMPSON (secretary to the Railway Company) said, he was sure the directors had no objection to call a meeting, but they were obliged to conform to the Act of Parliament. If the requisition were properly signed, a meeting would, without doubt, be called on the earliest possible day.

The Act requires that not fewer than ten shareholders, representing 500 shares, shall sign the requisition. Several gentlemen who were present immediately affixed their signatures.

A vote of thanks was then unanimously passed to the chairman, who briefly acknowledged the compliment; after which, the meeting, which was far from being numerously attended, broke up.

SCOTTISH UNION FIRE AND LIFE INSURANCE COMPANY.

The annual general court of proprietors of this company was held in the Waterloo Hotel, Edinburgh, on Wednesday, the 4th inst.

Admiral Sir D. MILNE, K.C.B., in the chair.

The manager submitted to the meeting a report, exhibiting the progressive increase of the business of the corporation in all its branches, for the year ending 1st August last, and recommending a continuance of the dividend of 6*l.* per cent.—which report, on the motion of G. NAPIER, Esq., seconded by W. FORRESTER, Esq. (chairman of the Glasgow board of management), was unanimously approved of, and the dividend declared payable accordingly on 24 January next.—On the motion of J. JARDINE, Esq., seconded by H. BAIRD, Esq., the following resolution was unanimously adopted, viz:—“That the directors be authorized to make advances, by way of loan, on the following securities, or any of them, viz:—1st. On policies of insurance on lives issued or to be issued by this corporation or by any other company. 2d. On such policies, with the addition of personal security for payment of the future premiums and interest; and, 3d. On bonds or other securities of any company incorporated by Act of Parliament.”—After the appointment of a board of directors for the ensuing year, the thanks of the meeting were voted to the directors for their attention to the affairs of the company, and to the chairman for his conduct in the chair.

STAFFORDSHIRE HEMP AND FLAX COMPANY.

A meeting of the directors of this company was held at Rugeley, on Tuesday last, when the negotiations with the inventor of the process and other parties, which have so long delayed the proceedings of the company, were brought to a conclusion, much to the prospective benefit of the shareholders. A call of 3*l.* per share was agreed to, and it is expected that active operations will be commenced soon after Christmas, and that a building will be erected in Stafford for the weaving department of the company. A general meeting of the proprietors will also most likely be shortly convened to sanction certain alterations in the deed of settlement.

VERSAILLES AND ST. CLOUD RAILWAY.

The general meeting of the shareholders in this company was held on Tuesday, the 3d inst. After hearing the report of the directors and engineers, the meeting authorized the raising of a loan of 2,000,000 francs, at 5 per cent. interest, to meet the supplementary expenditure, amounting according to the report, to 1,748,514 francs, of which 500,028 francs are for repairs rendered necessary by the nature of the soil, 591,177 francs

for the purchase of additional engines and carriages, &c., and 339,206*l.* for the further payment of land; the remainder of the 2,000,000*l.* will be used as a floating capital. It appears that the cost of the improvements has been 11,324,123 francs; engines, carriages, &c., 3,191,177 francs; interest, &c., 394,008 francs; making a total of 14,909,308 francs. The receipts of the railway, from the 4th August to the 10th October, were:—

	Passengers.	Receipts.
Paris to Versailles	367,290	416,208
Service of St. Germain for 29 days	12,673	7,680
Baggage		1,687
	379,963	425,516 <i>fr.</i>

The works at the part of the line injured a short time since by the heavy rains, though they have been carried on with activity, have been much impeded by the unfavourable weather, and are not yet quite completed.

STEAM COMMUNICATION WITH INDIA.

The subject of steam communication, and the glaring defects of the present limited scale on which it is conducted in India, are exciting daily more attention in that country, and the result promises to be that the improvements neglected or refused by the authorities here will be taken in hand by individual enterprise. A great meeting was held in Calcutta early in October, called by a requisition having 730 signatures attached, to take into consideration the whole question of steam communication as it exists, and as it ought to be carried on, at which a petition was, after some discussion, resolved upon to the President of the Council and Deputy-Governor, which contains a remarkable exposure of the grievances to which Calcutta has been subjected under the present system more peculiarly, although other parts of India, with Bombay itself, have suffered more or less from the same causes. Some of the cases cited have been more or less alluded to under this head on various occasions, but a recapitulation of the leading particulars, with other facts not before so well known, may be adverted to, as embodied in the petition itself, from which the utter inadequacy of the steam accommodation at Bombay may be safely inferred. Thus, on the 5th of May last, the steamer *High Lindsay*, with the overland mails of the 10th of April, had to put back; they were subsequently forwarded by the *Berwick*, thirty-seven days after the last date advertised for letters leaving Calcutta. On the 1st of August the *Zebra* steamer left Bombay without the Calcutta mail of the 17th of July, which was the date notified for its transmission to Bombay. The letters were then sent by the *Berwick*, which did not leave until the 10th of September—that is, fifty-eight days after the latest date of letters from Calcutta. The same steamer left Bombay without the Calcutta mails of the 26th and 27th of August, although these dates were advertised by the Postmaster-General of Calcutta as being in time. They did not, therefore, leave Bombay until October, or upwards of forty days after the date of the letters in “3073 covers” from Calcutta. These were the outgoing failures or blunders only of the present defective system, as complained of; but the incoming dispatch was not less irregular or inconvenient. The mail from England by the Red Sea was landed at Bombay on the 30th of March, but was not all delivered in Calcutta until the 4th of April, or fifteen days after reaching Bombay. The mail which got to Bombay on the 5th of May was not delivered in Calcutta in less than sixteen days afterwards. The mail of the 21st of June was not received in Calcutta before the expiration of seventeen days, that of the 27th of June not until eighteen days afterwards; the receipt of that of the 27th of July was not completed in less than twenty-one days, and that of the 6th of September, until twenty-six days at Calcutta after its arrival at Bombay. These mishaps occurred in the present year, but various others similar were detailed of 1837 and 1838, of which one instance may suffice as an example of all. In June, 1838, a notice was issued at Bombay that the *Atalanta* would leave on the 3d of July for the Persian Gulf. The Calcutta mail for this opportunity reached Bombay on the 20th of June, four days before the advertised time. The mail was detained nevertheless until the departure of the *Berwick* on the 12th of September, or eighty-nine days after its dispatch from Calcutta. The covers on this occasion, amounting to 2666, did not reach London till 135 days after leaving Calcutta, a length of time equal to the whole of a slow voyage by sea. Such and several more proofs of mismanagement and casualties susceptible of easy prevention are embodied in the petition, and constitute a formidable catalogue of grievances, more particularly affecting the presidencies of Calcutta and Madras, although Bombay itself is but indifferently served by the inefficiency of the present means of steam conveyance.

In conclusion, the community of Calcutta express their opinion, and advert to the recognition of its correctness in certain declarations of the Lords of the Treasury and the Board of Control, that nothing short of a direct communication by steam can be of advantage, or remedy the evils complained of; nothing more was required for the accomplishment of this object than “steam-vessels of a power and capacity which should insure their making a certain and speedy voyage between Bombay and Aden; between Calcutta, Madras, Point de Galle, and Aden; and between Aden and Suva, at all seasons of the year.” It is observed that “such steam-vessels, the property of private companies, now traverse the Atlantic, between Great Britain and the United States, winter and summer, with a speed and regularity which leave nothing to be desired;” and it is urged upon the President of the Council to make such representations on the subject, on the part of the Supreme Government of India, as should induce the court of directors to “close with the proposition” submitted to them and approved by the government of Calcutta, by “Mr. T. A. Curtis, of London, on behalf of a joint-stock company,” which is under “pledges, and pledges to be prescribed by Parliament, prepared” to carry out the views thus explained.

In the course of the meeting it was proposed to raise a subscription at once, and build one steam-vessel, which might be done for 60,000*l.*, and so prove the merits and the profit of steam navigation direct without reference to the tardy action of the authorities at home. And this, it was contended, might be effected without damage to the “comprehensive scheme” advocated in the petition.

THE “PRESIDENT” STEAM-SHIP.

This splendid vessel was towed out of the dock of Messrs. Young and Curling, on Monday last, by three Greenwich steamers, and proceeded down the river to Blackwall, where she was safely moored. She will remain in her present situation for a few weeks, when she will proceed to Liverpool to take in her engine and machinery. The yard was crowded with a throng of ladies, as well as gentlemen, and the river in front of the gates of the dock covered with steamers, tug-boats, wharves, and boats of all sorts. The *President* was decorated with the British and American flags, and presented a noble appearance. The comparative dimensions of this vessel and of the *British Queen* are thus:—

	British Queen.	President.
Length extreme from figure-head to taffrail	275 ft. 0 in.	358 ft. 0 in.
Length on upper deck	245 ft. 0 in.	323 ft. 0 in.
Length on main deck	228 ft. 0 in.	300 ft. 0 in.
Length of keel	228 ft. 0 in.	280 ft. 0 in.
Breadth within paddle boxes	40 ft. 0 in.	41 ft. 0 in.
Depth over keel	40 ft. 4 in.	41 ft. 4 in.
Depth over all	64 ft. 0 in.	68 ft. 0 in.
Depth	37 ft. 0 in.	—
Depth from spar deck	—	33 ft. 0 in.
Depth from main deck	—	23 ft. 6 in.
Tonnage	2016 tons	2366 tons
Power of engines	600-horse	600-horse
Diameter of cylinders	77½ in.	80 in.
Length of stroke	7 ft.	7 ft. 6 in.
Diameter of paddle-wheels	31 ft.	30 ft.

The *President*, it will be seen, is the larger vessel. She has three decks, is built of oak, with fir planking, and has three masts. Her upper deck is flush from the bows to the stern, and is without a poop. As she is at present little better than a hull, it is impossible to speak of her accommodations, but she appears calculated for speed and stowage.

ROYAL BELGIAN STEAMERS.—The Belgian Government, in the budget of the Minister of Public Works, alluding to the marine, notifies that “a separate project will be submitted to the Chambers to meet this expense, whether by means of a transfer, or by means of a special credit, destined to complete the system of the railroad by some steam-boats. This measure is considered to be the ablest one projected since the settlement of the country.”

Advices from Liege state that Mr. John Cockerill has set out for St. Petersburg, taking with him one of the principal persons employed at his works, and three engineers. The Emperor Nicholas, it is added, has advanced to Mr. Cockerill 10,000,000*fr.* at 5 per cent., secured on all his establishments in Belgium, Russia engaging to purchase annually to a certain amount machinery to be manufactured in them, which is to diminish annually, as the Emperor, assisted by Mr. Cockerill, shall have created similar establishments in his own dominions.

SILVER MINE.—The existence of silver ore in Glenashgagh, in the barony of Enniskillen, having been ascertained, preparations for working a mine of it are in considerable forwardness.—*Derry Journal.*

WANTED, a STEAM-ENGINE for PUMPING, from 45 to 55 inch cylinder, and not under 9 feet stroke in the working barrel. Apply to Messrs. Eytton and Co., Mostyn Collieries, Holywell, Flintshire, stating price, when erected, and the length of time it worked.

MEETINGS OF SCIENTIFIC BODIES.

SOCIETY.	PLACE OF MEETING.	DAY.	HOURL.
British Architects	16, Grosvenor-street.	Monday	8 P.M.
Statistical	4, St. Martin's-place.	Monday	8 P.M.
London Electrical	Adelaide-street	Tuesday	8 P.M.
Linnean	Boho-square	Tuesday	8 P.M.
Society of Arts	Adelphi	Wednesday	8 P.M.
Geological	Somerset House	Wednesday	8 P.M.
Royal	Somerset House	Thursday	8 P.M.
Antiquaries	Somerset House	Thursday	8 P.M.
Scientific Society	Charlotte-st., Bloomsbury	Thursday	7 P.M.

PUBLIC COMPANIES.

COMPANY.	PLACE OF MEETING.	DAY.	HOURL.
Rio Doce Company	George and Vulture	Dec. 16	1.
Mount's Bay Mining Company	King's Arms Inn, Holborn	18.	1.
British Waterproofing Company	452, West Strand	18.	1.
European Gas Company	39, Finsbury-circus	19.	12.
Consolidated Copper Mines of Coler	28, Austin-frisks	20.	1.
South Eastern Railway	London Tavern	20.	1.
Bahia Steam Navigation	George and Vulture	30.	1.
Trefoil Mining Company	7, St. Mildred's-court	30.	1.
Canada Company	St. Helen's-place	31.	1.
Bolivar Mining Association	9, Warrford-court, City	31.	1.
Colonial Bank	London Tavern	Jan. 2	1.
London Joint-Stock Bank	Princes-street Office	11.	1.
Australasian Agricultural Company	12, King's Arms-yard	21.	1.

COMPANY.	PLACE OF MEETING.	DAY.	HOURL.
Birmingham & Gloucester R'way	101.	Dec. 13.	Jones, Lloyd, and Co.
Wheat Elizabeth Mine	17.	21.	Bosquet and Co.
Durham County Coal Company	24.	28.	Williams; Darlington District
West Wear Jewell Mining Assn.	109.	31.	London and Westminster Bk.
Sheffield and Manchester R'way	81.	Jan. 1.	As former calls.
London and Birmingham R'way	81.	8.	67, Lombard-street.
Eastern Counties Railway	31.	10.	London and Westminster Bk.
Fire-Preventive Works	16.	10.	London Joint-Stock Bank.
Edinburgh, Leith, & Newhaven R.	25.	Feb. 1.	Williams, Deacon, and Co.
Eastern Coast of Central America	16.	60.	Morgue-street.
Cheltenham & Gt. Western R'way	74.	10.	Roberts and Co.
Rhymney Iron Company	51.	13.	7, Laurence Pountney-hill.
General Reversionary Interest	101.	14.	Drummond, Charing Cross.

COMPANY.	PLACE OF MEETING.	DAY.	HOURL.
Holmshush Mining Company	11.	per share	New Broad-street. Dec. 26.
West Middlesex Water-works	11.	per share	Office, Marylebone. Jan. 6.
Bank of British North America	11.	per share	7, St. Helen's-place. 6.
East London Water-works	11.	per share	St. Helen's-place. 1.
National Provincial Bank of England	11.	per share	18, Austin-frisks. 13.
National Bank of Ireland	11.	per share	15, Old Broad-street. 13.
Reversionary Interest Society	11.	per share	17, King's Arms-yard. 13.
Hungerford Market Company	11.	per share	9, Villiers-street.
South Canadian Mine	11.	per share	Office of the company.
Durham County Coal Company	11.	per share	Office of the company.

WEEKLY RAILWAY TRAFFIC RETURNS.

LONDON AND BIRMINGHAM RAILWAY.	
[Length of Line, 112½ miles.]	
The gross amount for conveyance of passengers, parcels, carriages, horses, and mails, for the week ending the 7th December	£8,419 5 6
For merchandise for the same time	1,494 5 11
Cattle	138 15 6
Total	£10,052 6 11

GREAT WESTERN RAILWAY.	
[Length of Line opened, 31½ miles.]	
Day.	Passengers.
Thursday, Dec. 5	1159
Friday, " 6	1044
Saturday, " 7	944
Sunday, " 8	777
Monday, " 9	1331
Tuesday, " 10	1429
Wednesday, " 11	1393
Total	8,379
Merchandise (322 tons, 8 cwt. 3 qrs. 50 lbs.)	1738 19 3
Cattle	193 9 3
Total	£1918 1 2

LONDON AND SOUTH-WESTERN RAILWAY.	
[Length of Line opened, 58½ miles.]	
Total receipts for passengers, parcels, &c., on this line for the week ending December 8, 1895 7s. 4d.	

EASTERN COUNTIES RAILWAY.	
[Length of Line opened (to Romford) 10½ miles.]	
Passengers to December 1	149,001
Iditto, for the week ending Dec. 8	3,397
Total passengers	152,398

LONDON AND GREENWICH.	
[Length of Line, 3½ miles.]	
Day.	Passengers.
Friday, Dec. 6	109 14 9
Saturday, " 7	101 1 7
Sunday, " 8	104 10 0
Monday, " 9	135 18 4
Tuesday, " 10	109 15 7
Wednesday, " 11	104 10 6
Thursday, " 12	95 11 11
Total	£748 11 8

* The first six months from the opening of this line terminated on the 4th inst.; during that period 311,319 passengers have travelled on the line, and the money received is £7,466 11s. 3d.

NOTICES TO CORRESPONDENTS.

We had intended making some observations respecting the sale of Ballymurnagh ores at Liverpool, and its probable consequences, this week, but are compelled to postpone them until our next. The particulars of the sale will be found in the usual place.

We are obliged to Mr. Charles Manby—he will, however, observe that we were previously furnished with a copy.

A SHAREHOLDER in the SWISS ANTHRACITE COMPANY.—We are surprised, with our correspondent, that no arrangement has yet been proposed in the affairs of this company. We would recommend his applying to Mr. Anichini, who will, doubtless, afford him the requisite explanation of the causes of the delay.

The communication of Alexander Russell and Son reached us too late to be attended to this week.

THE MINING INTEREST.—The following subscriptions have been received:—
W. H. Dunsford, Wharfedale Treasury Mine £1 1 0
Henry Hartop, Barroley 0 0 0

THE MINING JOURNAL, Railway and Commercial Gazette.

LONDON, DECEMBER 14, 1895.

In our last Number will be found inserted the letter of Mr. W. LONG WREY, "On the Use of Anthracite Coal," to which we would direct attention; as also to the several communications of "An Observer," and "Speculator," on the same subject. We had not space last week to dwell on the advantages which might be calculated upon from the use of anthracite beyond that devoted to our remarks, which had more particular reference to the successful result of Mr. CRANE's experiments, under the patent secured by that gentleman for its use in the manufacture of iron, by the application of the hot blast.

The subject is one of so much importance, that, public attention being once directed to it, we feel that a duty devolves on us, of rendering our columns the medium of communicating all information which may tend to the elucidation of any point involved in obscurity, or which may appear to require explanation. It is our intention, on an early occasion, to prosecute the subject by further remarks, the result of personal observation. We will this week content ourselves by making some few comments on the correspondence to which we have made reference. The experiment on the Thames, in using anthracite for steam navigation, has been attended with success; but, if our memory serves us, anthracite

was used seven or eight years since, by the American steamers—a report, we believe, attested by Mr. BACON, having been, on the occasion, submitted to us. With reference to the use of anthracite in furnaces of stationary engines, we know it to have been in use for some years past, by the New River Water-Works Company, one or two breweries, and at the establishment of one or more engineers, who informed us that a saving of fuel was effected, and a regular heat "kept up," although some little care was required in putting light to the fire, as also an alteration in the furnace bars. Mr. CHANTER's patent, we think, would be found well adapted for the use of anthracite, as the furnace is so constructed as to char or heat the coal in its progress to the seat of the boiler. We must not, however, "travel out of the record," therefore, confine our remarks to the letters of our Correspondents, doubting not that they will elicit from others, more competent than ourselves, from local acquaintance, or practical experience in the application of this once disregarded, but, as we believe, valuable mineral, observations which may prove of importance to the mining, as they will to our scientific readers. Taking, then, Mr. WREY's letter in the first place, remarking, as it does, on our report of the first exhibition of the Anthracite steamer, that gentleman states unequivocally, that "the grand novelty, the furnace," is not an invention of Mr. PLAYER's at all, but was invented by the celebrated Mr. WATT, and patented by him so long ago as 1785, although not used by him for burning anthracite.

On this point we are desirous of avoiding any expression of opinion; it would appear to us, that, although the furnace may be similar to that invented by WATT, yet its application to the use of burning anthracite being that which he never contemplated, involves a question on which the patent mainly rests. We now proceed to the second objection of our Correspondent, in which he observes, that he has used the furnace of Mr. PLAYER for the last fourteen years, which is simply a matter of dispute as to priority of claim of invention between the two parties.

The liberal feelings embodied in the conclusive paragraph of Mr. WREY's letter, induce us to hope, that, although we think a little influenced by personal feelings, his letter may lead to beneficial results, and that his coal-field will be worked with advantage to the country, as it reduces the cost of iron, while it affords employment to the labouring community.

We now proceed to note the letter of "An Observer," whose object is that of "forming a society to perfect the manufacture of bar or malleable iron with anthracite." Our correspondent is, doubtless, well acquainted with the iron trade; indeed, if we mistake not, we have received, and inserted, on former occasions, lucubrations from his pen, which render it only a matter of surprise, that the remarks which have appeared in the MINING JOURNAL on this point, and the advertisement which was frequently inserted in our columns, should have escaped his attention. We readily admit his premises, and say with him, we "would earnestly recommend a cordial union of all parties interested;" but when he suggests that a society should be formed, for bringing into profitable use the application of anthracite, to purposes to which it is at present unknown, as well as to extend it generally when adopted, we have to repeat, that such a society does exist, the committee of which will, doubtless, be glad of his co-operation, and we refer him to the advertising columns of our Journal of this week, and also to that of the 27th July last (in which he will find the resolutions passed at a meeting of the anthracite proprietors, held on the 22d of that month, when a subscription to carry out the objects of the Association was entered into, and other steps taken). *En passant*, we may observe, like every thing else in the vicinity of Swansea, things move slow. We now arrive at the letter of "Spectator," which appears to us to be the most important, although less scientific, and conveyed in a few words; our correspondent recommends the establishment of an "Anthracite Coal Company," and we believe that a company of this nature, if established with prudence, would be of a highly beneficial nature. As to coal merchants joining in it, we think our correspondent is in error; any thing of the kind must be perfectly independent; a junction of interests of the anthracite proprietors and capitalists must be attended, we feel assured, with success.

Having noticed the letters addressed us, in our Editorial capacity, we next feel called upon to allude to the letter of Mr. JOHN HEYS, copied in our Journal of last week from the *Cambrian*, and while we acknowledge the value of the information acquired, we cannot admit the position which Mr. HEYS would assume for his friends, and we have no hesitation in prophesying, that the meeting of Mr. CORT's friends will not take place, as contemplated by the writer; indeed, we regret that Mr. HEYS has so mixed up Mr. CORT with his argument—that gentleman, it is to be presumed, being sufficiently known and respected, not to require a reference to the ability or service of his father in the year 1784. Mr. HEYS commences his letter to our contemporary, by stating that "more than half a million sterling is embarked for the manufacture of iron," in the anthracite districts of Carmarthenshire and Glamorganshire; this we at once deny, and regret that any party should, from interested motives—to which we must ascribe this letter—attempt to disguise the truth. Let ours be the province of aiding speculation, when it is likely to be attended with beneficial results, as also elucidating the truth; but never let us, with a desire to benefit the one, make an attempt calculated to sacrifice the many. We are the more disposed to deal in this language, because there is a vast district unworked—easily attainable by fair means—but from which concoctors and projectors of companies may be anxious to make fortunes at the cost of the deluded shareholders. This shall not come to pass if we possess the means of guarding the public, while we confidently state our conviction, founded on personal observation, and the information collected from authentic sources, and practical men, that the anthracite field of South Wales holds out to the capitalist advantages which should be secured at once, to enable the possessor to reap the certain profit.

We cannot conclude these remarks, without cautioning our friends from being "humbugged" by letters and reports; anthracite holds out large profit, but "gold may be bought too dear."

A short residence in the locality, and a slight knowledge of parties, has an effect, and we hope it has not been lost on us, nor found to be valueless to our readers.

We regret to find so little importance attached to a matter intimately connected with Joint-Stock Companies at the present moment, and which, to us, appears to be more calculated to mislead than even the representations of the projectors as to the ultimate interest or dividends which may be anticipated from the projected undertaking. It is hardly necessary for us to state, that our observations are directed to the principle laid down by several companies, of securing to the proprietors an interest of 4 or 5 per cent. on the advanced capital—or, at least, a return in the shape of interest on those shares on which the calls may have been paid, and thus affording to them an advantage over those which may be in arrear. We are aware that this course has not only been defended by some of our contemporaries, but that one has actually taken credit to himself for the suggestion, and referred to the particular article in which such step was recommended.

We cannot but repeat the opinion we have before expressed, that the proprietors, in taking interest on their advances, are abstracting from the capital they have supplied, and, therefore, whether the undertaking be prosperous or not, it is in the one case a diminution of the profits, or in the other, a return of capital, although in no way diminishing the loss. We wish this subject was taken up by shareholders generally, and that the simple question was submitted to the directors—"Whence arise the dividends or interest paid to us on the advances we have made?" The answer, we contend, must be, that it is a return of 4 or 5 per cent. of the capital advanced by the shareholders.

On this principle, if that the public are to be so "gulled," it is only a matter of surprise that a Joint-Stock Company is not formed (no matter its professed objects) which will undertake to return to the proprietors, for the first three years from its formation, 10 per cent. on their advances. This would be a sure game; it would leave 70 per cent. to the projectors, and we think there would be little difficulty to form a direction, indeed, we could ourselves furnish the names of two directors—THOMAS NOAKES, Esq., and JOHN STYLES, Esq.—with these gentlemen taking a prominent part, and the public easily confiding in their representations, we should not doubt but that the shares would advance to a premium, and the objects of the concoctors be thus secured.

A letter appeared in our last Number, on the subject of the Copper Works in the vicinity of Swansea, and the advantages which might be contemplated by the adoption of some process (referring to an article on the Sicilian Sulphur Trade, in the Journal of the 9th ult.) whereby the poisonous vapours might, if not turned to some account, at least be rendered harmless. We are glad to find, by the List of Patents, that Mr. TROUGHTON has directed his attention to a subject so serious in its nature, as affecting vitality, and having a considerable influence on the cost of the make of copper—a question most important to the miner as (assuming the smelter to be honest in his dealings, which we are not prepared to admit,) the reduction in the smelting establishment will naturally tend, while the price of metal is sustained, to advance the price of ore, and thus to render the mines of Cornwall productive, which, with a vast outlay and monthly expenditure of thousands, require alone to be treated honestly to yield a fair return to the adventurer for the advances he may have made.

It will afford us pleasure to insert any communication from the patentee on the subject, or the observations of correspondents, at the same time that we should be glad to learn the result of the experiments of that gentleman, under a former patent, at the works of Messrs. LOGAN and BENSON, which we witnessed, and only waited an official report of their successful issue, to have given it to our readers. We must confess we had our doubts at the time, and fear that the hopes of Mr. TROUGHTON, as well as those which we ourselves entertained, have not been realised by the success anticipated; we wish him better success on the present occasion, and shall most gladly aid him in his object.

We are glad to find so great an improvement in the standard of the past week, it having advanced from 106½ 1s., with 7½ produce, to 110½ 3s., with a produce of 7½, being an advance of nearly 3l. on the standard of the preceding week.

It is with regret we find that the hearing of the cause, "CRANE v. PRICE," which involves the important question of the validity of the patent taken out by the plaintiff, has been again postponed until the month of February, in consequence of Chief-Justice TINDAL (before whom the cause was to be tried) leaving London to preside at the Monmouth Special Commission. The expense of summoning upwards of forty witnesses from Scotland, South Wales, and other parts, with lawyers' fees increasing the heavy costs which must necessarily be attendant on the trial of a question of so much importance to the mining interest, and, as it appears to us, calculated to effect a considerable revolution in the iron trade, and to enhance most materially the value of property hitherto deemed of insignificant consideration. We hope the question may be settled by arbitration, or some arrangements entered into, before the next term, as much contradictory evidence must necessarily be given, and we fear that, whatever the result, injury will be inflicted on the mining interest, and the character of professional witnesses.

THE FUNDS.

CITY, FRIDAY EVENING.

Consols closed at 91½ 92. The Three-and-a-Half per Cent. Reduced Annuities 98½ 99, and the Three per Cent. Reduced 90½ 91 money. Bank Stock 178 money. Exchequer Bills 4 2 dis.; small 3 1 dis.; and India Bonds 8 6 dis.

Colombian Bonds 24½ 25 money, and 25½ account. Mexican Six per Cents 28½. Portuguese New Fives 33½ 34; and the New Three per Cents 23½ 24. Spanish Bonds, with May Coupons, 23½ 24. Dutch Two-and-a-Half per Cents 53½ account, and the Old Fives 99½ money.

Brighton Railway Shares 15½ dis. Birmingham 49½ 50 pm. Greenwich 7½ dis. South-Western 2s. 3d. pm.—British North American Bank 3 dis. London and Westminster 1½.

The State of Venezuela has made proposals, through their agents in London, for a settlement of their proportion of the Colombian debt

MINING STATISTICS.

which they estimate at 25 per cent. (equal to 1,188,390*l.*), and for which they offer to issue debentures, bearing interest at 2 per cent., payable in London by half-yearly payments in advance, the original bonds being given up to be cancelled, and the first payment to be made on the exchange of the securities. It appears that the Colombian debt is now 6,625,950*l.*, besides thirteen years' interest, for the whole of which the State of Venezuela, by the original bonds which it now proposes to cancel, is jointly liable with New Grenada and Ecuador, so that the government of Venezuela, by their proposed plan, would accomplish a very profitable arrangement, in so far as they would thus restrict her responsibility to their own proportion, leaving the bondholders to make the best terms they could for the balance with New Grenada and Ecuador. We understand that the division of the debt, in the proportion stated by Venezuela, has been agreed to by the two last-mentioned States, although their commissioners have not yet given in their official report. Therefore, so far as the debtors are concerned, there does not appear to be any serious difficulty existing to the proposed settlement; but we should apprehend that the bondholders will not so readily agree to it, and that they will not consent to deliver up the original bonds to be cancelled. The agents here, we understand, have anticipated as much, and expressed their willingness to allow the differences to be written off on the back of the original bonds, instead of delivering them up. We really cannot say anything in favour of such a proposal, unless it be that "half a loaf is better than no bread;" but when it is considered that the whole interest is to be sacrificed, and that the only remuneration to be given is 2 per cent. upon the capital debt, there can be but one opinion as to the character of the scheme, and as to the cruel injustice which will be suffered in consequence by the bondholders.—A numerously-attended meeting of the bondholders was held on Friday (yesterday) at the London Tavern, to take into consideration the terms offered on the part of the Commissioners, when the several propositions were unanimously rejected, after a long discussion.

LATEST INTELLIGENCE.

CITY, TWELVE O'CLOCK.—Consols, Account, 91½; 2; Three per Cents Reduced, 90½; 3½ per Cents Reduced 98½; Long Annuities 13½; Bank Stock, 178; Exchequer Bills, 4 2d.—Birmingham and Derby Railway, 26 dis.; Blackwall, 3½ 3½ dis.; Brighton, 15½ dis.; Bristol and Exeter, 28 dis.; Eastern Counties, 13½ dis.; Croydon, 8½ 9 per share; Greenwich, 12½ ½ per share; Great Western, 8½ dis.; Gloucester and Birmingham, 30 28 dis.; London and Birmingham, 52 52½ pm.; New, 14½ pm.; Manchester and Birmingham, 11½ 11 dis.; Manchester and Leeds, 7 pm.; North Midland, 8½ 7½ dis.; London and South-Western, 38½ 9 per share.—London and Westminster Bank, 21½ per share.

REDUITS, DEC. 12.—Average standard, 109*l.* 5s.—Average produce, 7½.—Quantity of ore, 2602.—Quantity of fine copper, 200 tons 2 cwt.—Amount of money, 14,713*l.* 8s. 6d.—Average standard of last sale, 110*l.* 3s.—Produce, 7½.

Prices of shares in mines obtained by auction, by Messrs. Shuttleworth and Sons, at the Mart, December 6th inst.:

Tresavean	£1820 per share.
Hallenbeagle	132 "
Wheel Speed	100 "
South Wheel Basset	28 "

PRICES OF SHARES IN LIVERPOOL.—Eastern Counties Railway, 4*l.* 12s. 6d.; Grand Junction, 20*l.*; half shares, 7*l.* 10s.; Great Western, new shares, 14*l.* 10s.; London and Birmingham, new shares, 30*l.* 15s.; London and Brighton, 14*l.* 2s. 6d.; Manchester, Bolton, and Bury Canal and Railway Company, 31*l.* 15s.; Manchester and Leeds, half shares, 20*l.* 7s. 6d.; Midland Counties, 60*l.* 15s.—Monk's Ferry, 3*l.* 17s. 6d.—*Gore's Liverpool Advertiser.*

PRICES OF SHARES IN MANCHESTER.—We quote the following from the monthly list published by Mr. Earle Langston:—Grand Junction Railway, 200*l.*; ditto, half shares, 7*l.* 10s.; Leeds and Selby, 65*l.*; Leicester and Swannington 71*l.*; Liverpool and Manchester, 183*l.*; ditto, half shares (40*l.* paid), 70*l.*; ditto, quarter shares (25*l.* paid), 42*l.*; London and Birmingham, 141*l.*; ditto, quarter shares (5*l.* paid), 21*l.* 10s.; ditto, third shares (16*l.* paid), 30*l.* 10s.; Sheffield and Rotherham, 31*l.*; Birmingham and Gloucester, 30*l.*; Chester and Crewe, 25*l.* 10s.; Great Western, 55*l.*; ditto, half shares, 15*l.*; Great North of England, 20*l.*; Hull and Selby, 23*l.*; Lancaster and Preston, 27*l.*; Manchester and Birmingham, 14*l.* 5s.; Manchester and Leeds, 67*l.*; ditto, new shares (15*l.* paid), 20*l.*; Midland Counties, 50*l.* 15s.; North Midland, 77*l.*; Northern and Eastern, 14*l.*

PRICES OF SHARES IN BIRMINGHAM.—Birmingham Banking Company, 22*l.*; Northamptonshire Union Bank, 14*l.*; London and Birmingham Railway, 142*l.*; ditto, 32*l.* shares, 30*l.* 15s.; Grand Junction, 202*l.*; Birmingham and Derby, 55*l.*; Birmingham and Gloucester, 34*l.*; Old Birmingham Canal, 218*l.*—*Midland Counties Herald.*

EXPORTATION OF THE PRECIOUS METALS.—The exportation of the precious metals from the port of London to foreign ports for the week ending the 5th inst. was as follows:—Silver coin and bars to Hamburg, 703,944oz.; ditto coin to Hamburg, 30,310oz.; Mauritius, 12,000oz.; Gibraltar, 83,000oz.; ditto bars to Madras, 22,277oz.

IMPROVEMENT IN SMELTING COPPER ORES.

We extract the following specification of Mr. William Jefferies, Holmestreet, Mile-end, Middlesex, metal-refiner, for "Certain improvements in the process of Smelting or Extracting Metal from Copper Ores," from the *Inventors' Advocate*:

The inventor claims the method of calcining or roasting metal ores so as to render them more pure for the smelting process. He also claims the structure of the building or furnace.

The building is merely square, and of sufficient height to admit of two floors; under the first floor is the ash-pit, that receives the cinder and ore that has passed through the draft holes, pierced in the whole surface of the floor or bed on which the copper or other ore is placed for the purpose of roasting or calcining. The ore is mixed on this bed or floor with a sufficient quantity of fuel—say two to three cwt. of coal to one ton of ore—the whole being ignited, it is left to burn gradually for four or five days; the door of the lower compartment or ash-pit admits the air to support combustion. The vapours arising from the ore, pass through a vent into the second floor, where the sulphuric acid and heavy parts of it are condensed, and the lighter and less injurious particles are allowed to escape through the vent-hole in the roof of the building.

The ore, being calcined or roasted, it is wetted for three or four days, and then mixed with unslacked lime or common soda; if lime be used, put 300lbs. of lime to one ton of ore; or if soda be used, put half a cwt. of soda to one ton of ore, thus rendering it more pure for smelting.

IMPERIAL BANK OF MANCHESTER.—The failure of this bank and the legal proceedings consequent upon that event, have brought to light some instances of extreme negligence in the officers of that establishment, which have been productive of much inconvenience to several individuals. By the Act of Incorporation, after providing that the secretary may sue and be sued in the name of the company, and that such officer shall not be liable for the debts of the concern beyond the amount of its property in his custody, a remedy is given to the creditors against all or any of the shareholders upon affidavit who may be enrolled as such at the stamp office; proof of the fact of such enrolment as shareholders being sufficient to enable the creditor to sue out judgment against such enrolled shareholders as he may select. About forty judgments were sought at the end of last term against several persons said to be enrolled shareholders, many of whom never held any shares whatever. On inspection of the affidavit made by the officer of the company at the stamp office, it appears that he did not swear that the persons so enrolled were shareholders to the best of his knowledge and belief, but that they were shareholders as appears by the books of the said company; thus perpetuating all the errors of the share-register in the deed of enrolment. Upon affidavit of this fact, however, the court have refused to issue judgment against any of the parties whose names have been thus surreptitiously given out as shareholders; but these parties have been put to much anxiety, and mulcted in a considerable sum as costs, for resisting the demand occasioned by the negligence of the parties to whom the enrolment of the shareholders was intrusted.

A very simple method has lately been adopted to render the surface of paint perfectly smooth, and eradicate the brush marks. It is done with a small roller covered with cloth or felt about eight inches long and two inches diameter, worked in an iron frame on pivots, similar to the common garden roller. The flitting coat by this method is made beautifully even, and looks exceedingly well.

In attentively reviewing the manifold pursuits and various habits of the industrious population of the British empire, few, if any, can be found offering more interesting matter for reflection, as well as for more active and practical exertion, than the condition of the numerous class dependent on our mines, collieries, quarries, and smelting works, all integral parts of the same great whole, for their daily subsistence. Surrounded as they are by perils unfelt by those to whose comforts they contribute so largely, with their lives constantly placed in the greatest jeopardy by the very nature of their pursuit, it appears strange that any attempts to render their occupation less dangerous should meet with neglect, the more especially if it be considered that such attempts are so carefully framed as to steer clear of individual interests, and, consequently, would lead to the supposition that, in this at least, jealousy would have no place.

We are led to these remarks from a perusal of the report of the Manchester Geological Society (which will be found at length in the last Number of the *Mining Review*), wherein it was stated that "it was one of the main objects of the society, to inquire into the statistics and machinery of mining, and to collect books, maps, models, sections, and mining records, to be registered and preserved in a public depository for the use of posterity, and to direct them where their researches may be most successfully and securely carried on." An example, worthy of being followed in every mining district, has been set in Newcastle, by Mr. Buddle, who "has lodged an immense number of plans and sections of old and new workings, &c., in a depository especially provided for the purpose, which will become invaluable references after the death of those to whom the practical knowledge of the state of the underground operations is now confined." It was to the attainment of a similar object that the Manchester Geological Society circulated in their own district a series of queries, which, if answered, would have led to a complete knowledge of the coal measures as now being worked, and might have elicited from plans of old workings much useful information with reference to the past. Not one reply was received—a result which cannot but surprise the observer, when the immense practical benefits which could not fail to result therefrom are considered. Every one conversant with mining operations, and even those of limited experience, are well aware that the approach to old workings—the very existence of which (as well as well observed in the report in question) has long since been forgotten—is not one of the least of the dangers attendant on a miner's life; and how thankful would he feel, in cases of doubt and perplexity, to be able to refer with as much, say, with far greater certainty, than the mariner to his chart, for the information which is to guide him with diminished danger and anxiety through his subterranean course. That such information may be secured to a future race of miners cannot admit of doubt.

It is not, however, to coal districts alone that our remarks will apply, although in collieries, from the greater extent of ground excavated, and the consequently greater danger, they occupy a very prominent place when considered with reference to any measures having the prevention of accidents for their object. Our copper, lead, tin, and, indeed, all subterranean works, are affected in proportion to their extent, and correct records should be preserved of the state in which retiring parties may have left them. In each district a depository might be especially devoted to this purpose, as is the case with the maps, &c., presented by Mr. Buddle; and, in order to secure the regular deposit of such information, we cannot but think it of such consequence as to be made compulsory on the mine proprietor to furnish it. Indeed, it requires but little consideration to be convinced that its refusal must result from a narrow-minded policy. A great part of the more accessible portions of our coal-fields are already worked away, and with workings extended on every side, occupying, or, having occupied, almost a continuous range, of miles in length; the dangers to the future miner, without some surer guide than at present, will be much greater.

Nor is it alone the prevention of accident which would the result of such a measure; it is also obvious that the practical geology of any district would be so much better understood, that vast sums of money, which have, in too many instances, been fruitlessly expended in situations where success, as it has been reluctantly forced on the conviction of those interested, could never have been anticipated, had geological knowledge gone hand in hand with mechanical skill or spirited enterprise. We yet hope to see the subject receive that attention from practical men which its importance deserves, whether considered with reference to motives of humanity or the more powerful incentive of self-interest for the present, and advantage for the future.

The subject of mining statistics, to which the above has reference, is one which we sincerely wish to see reduced to a more systematic and satisfactory condition, and with this view we purpose returning to the subject on an early occasion.

ORIGINAL CORRESPONDENCE.

ON THE PRICES PAID FOR COPPER ORE.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—Amongst the many communications to which the recent and yet existing discussion on the standard of copper has given rise, none have appeared explaining to those who may not have had directly the opportunity of acquiring the information, on the mode of calculation in use, which is well adapted, without strict examination, to mislead the judgment, and give rise to erroneous impressions. I beg, therefore, to offer a few remarks thereon, and to point out, by reference to the published accounts of sales, the peculiarity or apparent anomaly which presents itself at our weekly ticketings.

In the first place, a standard is assumed as the representative of the price of metallic copper in the market, and the per centage or produce being stated, it is easy to ascertain the value of a ton of ore; from which, it should be observed, are first deducted the returning charges of 2*l.* 15s. per ton, and the remainder is the price tendered at the ticketings. Nothing could be more simple than this, were the price of metallic copper always taken as the standard on which the calculations are founded, but such is not the case; and if the charge of 2*l.* 15s. per ton for returning charges be a fair one to both parties, then, if the produce be a correct one, the smelter, by buying on a standard of, as is frequently the case, 20 per cent. above the price of the metal, would appear to be playing a losing game. For example—at the sale at Truro, on the 5th inst., the fine copper (243 tons 4 cwt.) may be said to have been purchased at a price of 110*l.* 3s., which is equal to 26,788*l.*, and if from this the returning charges of 2*l.* 15s., viz. 9374*l.*, be deducted, the result will be, as appears on the ticketing paper, the amount of the sale (17,414*l.*). Now, this, at the first glance, would leave the copper smelter in a predicament, the price of copper being only 92*l.* or thereabout. The difference, therefore, between 92*l.* and 110*l.* 3s. would appear to be the loss borne by the smelter, viz. 18*l.* 3s. per ton, or about 4400*l.* on the whole sale. It would be folly to suppose that such a state of things really exists, and this leads to the consideration of the causes of such an apparent anomaly.

On reference to the ticketing papers, it will be uniformly found that ores of the highest produce are also those in which the assumed standard approaches nearest to the real price of metallic copper, and in many cases even descending beneath it. It would appear from this that the same rate of returning charges is not applicable to ores of all descriptions. A parcel of ten tons, with a produce of 10 per cent., produces only one ton of metal, for which returning charges to the amount of 27*l.* 10s. are allowed; another parcel, containing 30 per cent. of metal, requires only three and one-third tons to produce the same quantity of copper—the returning charges on which would be only 9*l.* 3s. 4d. In the former instance the ore may be bought at a standard for copper of 10*l.* above the market price, which, being deducted from the amount of 27*l.* 10s., leaves 17*l.* 10s. only as the value actually received by the smelter as returning charges on ten tons of ore. The latter may be purchased at a price much nearer the market price of copper, or, as is more likely, may be even 5*l.* below it, which, added to the 9*l.* 3s. 4d., would give 14*l.* 3s. 4d. as the amount received by the smelter for returning charges. It will be seen by this that the chief difference of standard arises from, and is dependent on, the absolute quantity of copper contained in the ore—the expenses of smelting bearing a very close proximity in both poor and rich ores, and the difference of standard being adopted as a convenient means of averaging the rate of returning charges.

I have not, in the above remarks, at all alluded to the opposite view which the inspection of the same calculations, or a thorough examination of the subject might suggest, viz., that the same object may be obtained

by the assumption of an erroneous produce or alteration of the real per centage of the ore. A reduction of 1, or even ½, per cent. beneath the absolute quantity of metal in the ore, would allow a considerable increase in the standard, and thus lead any one to suppose that prices were high when the contrary was really the case. This, however, may be supposed to be kept in some degree of check, if, as is most likely, the agents of the smelting companies communicate their buying produce, and by the miners themselves keeping counter assays.

I have neither taken into the account the allowance of 1 cwt. on every ton or parcel, making the real parcel 21 cwt., whilst all the calculations are computed on the ordinary ton of 20 cwt. There can be no doubt that a loss occurs in the transmission of ore in the first place by land carriage, and subsequently at the ports of shipment and discharge, although it cannot be supposed for a moment that the total amount so allowed can be lost; and here, again, is a source of gain to the smelter, which, on ores of high produce, must be very considerable. My object has been, in this communication, to enter into an explanation of the methods of calculation, and to lead to a more thorough examination of the details of the working of the system pursued in the sales of ore, and of the relative position of miner and smelter. I have to apologise for intruding at this length, and am,

Sir, your obedient servant,

Dec. 10.

CORNTHWIST.

ON THE ESTABLISHMENT OF IRON WORKS BY THE IMPERIAL BRAZILIAN ASSOCIATION.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—The manufacture of cast-iron from the ore by our foreign mining companies, upon which you remarked in your last weekly Number, is a highly interesting and important subject. Are you aware that, with one exception, every attempt at smelting iron ore in the blast-furnace, within the tropics, has proved a failure, and that only a few years ago the majority of scientific men who thought upon the subject, concluded that the humidity of the atmosphere and the high temperature were insurmountable obstacles?

Amongst others, three abortive attempts may be mentioned; the one to which you allude, at Gongo Soco, by a joint-stock company, another in Ceylon, by the British Government, and the third by the Hon. East India Company, in Bengal. It would make a long paper to enter upon an analysis of their proceedings in each undertaking; there was an abundant supply of rich iron ore, an unlimited supply of charcoal, and, last, though not least, no lack of money to try the experiment. In the face of all these unsuccessful trials, one individual, dependant upon his own resources, ventured upon the experiment in the presidency of Madras. Under his personal superintendence, and at his own cost, the first cast-iron was made in a blast-furnace between the tropics. He erected works at Porto Novo, at the mouth of the Vella river, which are now carried on by the India Iron and Steel Company. At this establishment cast-iron is made, well adapted for foundry purposes; when manufactured into wrought-iron it is of excellent quality, and for steel it is quite equal to the best marks of the Denamora mines in Sweden. These are not exaggerations, Mr. Editor, which you may easily satisfy yourself of if you will take the trouble to call at the India Iron and Steel Works, Thames Bank, Chelsea, where the company have for some time been working up a small proportion of their produce. I may also add, that several thousand tons of pig-iron, manufactured at the Porto Novo Works with charcoal, from ore (a pure magnetic oxide), may be seen by any person interested in the subject.

If the Imperial Brazilian Mining Association seriously intend to establish iron works in South America, they had better "look before they leap," for whatever be the chemical knowledge—whatever the practical experience of any man in this country, he will be at fault in making the attempt (without previous initiation) to smelt iron ore in the blast-furnace within the tropics.

The history connected with the Porto Novo Iron Works is highly interesting, and I trust that the talented and meritorious individual above referred to, will give it publicity. His indefatigable perseverance in encountering the almost overwhelming obstacles with which he has had to contend, is perhaps unequalled in the records of scientific enterprise. The gentleman alluded to is J. M. Heath, Esq., who has recently patented some improvements in the manufacture of iron and steel, the claim to priority of which a scientific correspondent of the *Mining Journal* disputes with uncommon sagacity.

I am, Mr. Editor, your obedient servant,

Dec. 9.

ALPHA.

MARKET FOR CARBONATE OF BARYTES.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—You would much oblige by informing us of a market for carbonate of barytes, in the state gathered from the mine, in your next Journal.

Your obedient servants,

Liverpool, Dec. 11.

W. A. E. & Co.

CAPITAL JOUT OF DIVIDENDS.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—Will you allow me, through the medium of your invaluable and liberally conducted Journal, to attract the serious attention of adventurers in mines and companies to a subject, by which thousands have been wantonly deceived and pecuniarily injured—it is that of paying "dividends out of capital"—an act as baneful and illegal as paying dividends out of the earliest profits is injudicious and deceptive. These subtle and delusive systems, so often successfully practised, as really to be thought lawful and fair, are done for no other purpose than that of raising the price of shares, to enable those in the "nefarious secret" to sell out and realise large profits. By "nefarious secret," I would be understood to mean, those who are acquainted with the fraudulent trick, intended to mislead the shareholder for the sordid gain of the betrayers of their trust. It is very truly said, "that what is everybody's is nobody's business," and therefore have I, as a great lover of truth and justice, imposed upon myself this pleasing task, and shall cite only two rather remarkable cases, as bearing upon the points in question. The first is the Equitable Gas-Light Company, the proceedings of which were given in your Journal of the 9th November, by which the public were informed that a meeting was convened by the directors for the express purpose of declaring a dividend—well, they met—the Bristol proprietors investigated closely their affairs, and pressed hard the directors, when the chairman rose—what to do?—to declare a dividend? No; but to inform the proprietors that the company's affairs were in such a state, as not, in justice, to admit of a dividend (when a general buzz of disapprobation ran through the meeting), one unhappy proprietor declaring that 10,000 guineas had left his pocket for his stake in the concern, and that he had repaired to the meeting under the full impression that he should receive a dividend, agreeably to the public notice of the directors. Now, we know that directors cannot command success, but they have at their command prudence and straightforward conduct, which, if they will not voluntarily act up to, they ought by law forcibly to be made to do. The other rather remarkable case, Mr. Editor, is a mine, called "Reliance," the directors of which paid in April last a dividend of 10s. per share, when, in the November following, they chose to find it expedient to impose a call of 1*l.* per share; this, to me, is irreconcilable, but, to say the least, it clearly demonstrates the injudicious and deceptive practice of paying dividends out of the earliest or first profits. Comments upon the past ought to benefit the future, and, therefore, must I state one startling fact (for it is too glaring to pass unnoticed); it is this—that the declaration and payment of this 10s. dividend had the (perhaps desired) effect of raising the Reliance shares to 35*l.* each, which, since the call of 1*l.* per share, may be purchased at 5*l.* One of the directors has lately retired, and two surveyors or agents are appointed to examine the mine, and report, &c., &c.

Turning, however, from particular instances, it may be made the subject of general remark, with reference to many public companies, that whilst glaring mistakes and deceptive dealing are passively submitted to by the great body of adventurers and proprietors, the callous-hearted may with impunity revel in their misdeeds—consider every unfair advantage meritorious—trample upon justice and truth—and square their deceitful practices by the rule of self-interest and sordid gain. As deceit and falsehood are their governing principles, so are law and justice their only corrections. Now, although law is a frightful alternative, because of its abuse (the law being pure, its limbs the reverse), still should I urge the numerous sufferers under improvident and unjust directions, to coalesce—to form a respectable committee—to subscribe a given sum each—and boldly to enforce the law against faithless directors; if it did not always succeed, it would have the beneficial effect of exposing their sordid venal practices, and of pointing out the well from the ill-conducted directions, moreover, it would

back up your truth-advocating and fearless Journal, the constant staunch public friend of all adventurers. I am, Sir, yours, &c.,
Bath, Dec. 11. THE SW.

[Our correspondent will observe, by some observations in another part of the Journal, that our attention has also been directed to this subject.—Ed. M. J.]

MINING CORRESPONDENCE.

ENGLISH MINES.

HOLMBURN MINING COMPANY.

Dec. 9.—The lode in the 100 fathom level west of the engine-shaft is making larger, and also more favourable in appearance, being now about sixteen inches wide, composed of muddle, spar, and blende, with stones of copper ore. In the eighty fathom level west of the engine-shaft the lode has greatly improved within the last week, is an excellent course of ore; two and a half feet wide, and worth seven tons, or from 70*l.* to 80*l.* per fathom. In driving at this level, east of Snell's winze, the lode still continues a good course of ore, about two feet wide, and worth from five to six tons of good ore per fathom. In the seventy fathom level west of the engine-shaft the end is driven in the cross-course about four feet, and is still driving with a satisfactory progress; the lode in this level up to the point of intersection continues very productive, therefore it is more than probable, when discovered at the western side of the cross-course, it will be equally as good. The winze in the bottom of this level is bored to the eighty fathom level below, in which the lode for the last four fathoms sinking has been very productive, worth about three and a half tons of ore per fathom. The stopes in the back of this level are looking extremely well; lode from twenty inches to two feet wide, and worth about four and a half tons per fathom. In the sixty-two west, and winze sinking below this level, no lode has been taken down during the past week. In this level driving east of the engine shaft the lode is much of the same size and character as for some weeks past, about two feet wide, composed of muddle and spar, with stones of copper ore. The lode in the stopes at the back of this level still continues a rich course of ore, two and a half feet wide, and worth about eight tons of excellent ore per fathom. The tribute pitches in general are looking favourable.

F. PHILLIPS.

CONSERVATION MINES.

Chicerton, Dec. 10.—In our fifty fathom level west, on the Chicerton lode, the lode is large, with a small portion of lead in it. We expect to cut the south lode in a few days, in the south cross-cut. Our forty fathom level is not rich at present; the lode looks kindly for lead. The thirty-two fathom level east and west is poor, but we have only driven a short distance without lead. We have now dressed forty-one tons, undressed twenty-three, and broke underground six.

J. BORLASE.

TRELOUGH CONSOLS MINING COMPANY.

Dec. 7.—We have nothing new in the prospects throughout the mine. Christie continues to look promising to be a good mine. The fifty fathom level is driving in a fine lode, worth from 18*l.* to 20*l.* per fathom. The forty east is looking well, worth about 10*l.* per fathom, and west it will pay for driving, besides leaving tribute ground. Our sampling next week will be as much as I had calculated on.

W. SINCOCK.

WEST WHARF JEWELL MINING ASSOCIATION.

Dec. 9.—Buckingham's, and the south adit shafts, are sinking in favourable ground. The forty-two east, on the south branch, continues much the same, being still worth 5*l.* per fathom. The thirty and forty two cross cuts south are extending in favourable ground. The thirty west, on the south lode, is twenty inches wide, composed of spar, interspersed with rich stones of yellow ore; this lode is much improved. The twelve fathom level, west on this lode, is composed principally of yellow ore, and is worth 5*l.* per fathom. Our tributes are working steadily.

S. LEAN.

UNITED HILLS MINING COMPANY.

Dec. 7.—In the ten fathom level east of eastern shaft the lode is five feet wide, with stones of ore. In the twenty-seven fathom level east the lode is two feet wide, producing but little ore. In the thirty-six fathom level east, of cross-cut north, still driving north in search of more lode. In the thirty-six fathom level west the lode is three feet wide, ore throughout, but coarse in quality. In the forty fathom level east of eastern shaft the lode is three and a half feet wide—one foot ore of a good quality. In the forty fathom level east of Webster's winze the lode is four feet wide, good ore. In the forty west of ditto the lode is four feet wide, good ore. In the forty fathom level east of Nettle's winze the lode is six feet wide, producing but very little ore. In the forty fathom level west of diagonal-shaft the lode is five feet wide—two feet good ore. In the fifty fathom level east of Williams' shaft the lode is three and a half feet wide, rather improved for ore since last reported. In the fifty west of ditto the lode is three and a half feet wide—two feet of the north part very good for ore.

C. PENROSE.

TRELOUGH MINING COMPANY.

Dec. 9.—In the twenty fathom level east the lode is small and unproductive at present. In the twenty fathom level west the lode is from two to three feet wide, producing good work; this end is much improved since my last. In the ten fathom level east the lode is from six to ten inches big, and contains some little ore. The lode in the Trelogan rise is from ten to twelve inches big, yielding tolerable work. In the ten fathom level west the lode is from three to six inches wide, with some little ore. Generally speaking our prospects have improved in the week.

J. BRAY.

ST. HILARY MINING COMPANY.

Dec. 8.—In the eighty fathom level east the lode is large, but at present disordered. In the eighty fathom level west the lode is nine inches wide—good ore. In the seventy fathom level east the lode has produced one ton of ore per fathom for the last ten fathoms, but it has improved this week; the lode is now eighteen inches wide, good ore. In the seventy fathom level west the lode is eighteen inches wide, composed of ore and spar. In the shaft in the bottom of the fifty fathom level west the lode is still disordered. In the sixty fathom levels east and west, on south lode, good ground, lode ten inches wide, composed of soft spar.

C. H. RICHARDS.

TINCROFT MINING COMPANY.

Dec. 4.—I beg to say that we have now made the necessary alterations in our pitwork, and shall be in course of working on the bottom of the engine-shaft to-morrow. The rise in the back of the 142 has rather improved for the time being. The winze, sinking in the bottom of the 132, is still looking well. We now expect a good lode till we communicate, which we hope to do in two or three weeks; by means of this winze, we shall greatly facilitate the breaking of tin stuff, and also ventilate the bottom level shaft. The 132 and west, I regret to say, is poor, the lode being in a disordered state. The 120, immediately over, is now being worked, partly on tribute and partly on pitwork; it produces some good work for tin. The 120 cut continues to yield good work for tin, and is very promising indeed. The 110, 100, and 90 cuts, are yielding fair quality work, both for tin and copper ore, as usual. The lode in the eighty-one end is about four feet wide, two feet of which is good work for tin, worth 40*l.* per fathom, leaving good back and bottom. The seventy-two end is producing good stones of copper ore, and promising. Our pitches both for tin and copper continue much the same as for some time past, and our prospects much the same. We have found the bottom of the old Tincroft shaft, and a very kindly lode for copper ore, only about six feet under the twenty-three fathom level; we have now set it to be sunk at 6*l.* per fathom; the water is what is called quick, but we hope to get down a few fathoms before the new engine goes to work; the walls of the engine-house are up, and masons now building the stack.

W. PAUL.

ARDMORE CONSOLIDATED MINING COMPANY.

Dec. 9.—In driving north and south on the course of the silver-lead lode, at the eighty fathom level, in the former we find the lode to be about six inches wide, saving work; and in the latter the lode has an excellent appearance, being from ten to twelve inches in width, producing rich work for silver-lead ore. The lode in the north end, at the seventy fathom level, is about four inches big, good work, and presenting, at this time, a favourable aspect. In the sixty fathom level north, the lode is from six to eight inches in width, and producing some good work, with a prospect more encouraging than seen for some time past; the lode in the winze, sinking below the seventy fathom level, is about one foot big, saving work for silver-lead ore. At the north mine, in driving the cross-cut, south of the engine-shaft, at the thirty fathom level, we are not at this time making that progress as hitherto, in consequence of the ground being so much harder; however, changes may be expected, but you may rely on our using every means in prosecuting this end. Respecting our next sampling, it is rather premature to state correctly the exact quantity, as the greater part remains undressed, but, from calculation, we expect to sample on Monday, the 16th inst., about thirty tons, if the weather proves favourable.

S. HARPUR.

TAMAR SILVER-LEAD MINING COMPANY.

Dec. 9.—In the south end, at the 125 fathom level, the lode is at present unproductive. Driving north, at the 125 fathom level, the lode is about fifteen inches big, yielding good ore; going south, at the same level, the lode is about one and a half foot wide, producing stones of ore. Going south, at the 115 fathom level, the lode is about a foot big, producing silver-lead ore. In the 100 fathom level going south, we have not yet cut the lode on the other side of the shaft. At the sixty-five fathom level driving south, the lode is a foot and a half big, and is very good work. The lode in the south end, at the eighty-five fathom level, is at present unproductive. Going south at the seventy-five fathom level, the lode is six inches big, yielding good stones of ore; there is no alteration in our tribute department, the men are working well.

MARK JAMES.

STEAM BOILER EXPLOSIONS.

Mr. J. Sims, of Chacewater, lately delivered a valuable lecture to the members of the Truro Institution, on Heat and its effects. The former part of the lecture was devoted to a consideration of the various powers of this chemical agent, and many interesting facts were communicated respecting its wonderful operations. The lecturer afterwards proceeded to speak of steam-boiler explosions, and as Mr. Sims is an engineer of much experience and of established reputation, we have much pleasure in communicating his opinions to the world, as the subject is one of the deepest interest, and cannot be too frequently canvassed.

And here I beg to call your attention to a few brief remarks on steam-boiler explosions, which I have been led to make in consequence of the many distressing accidents that have occurred in this country during the last few years, and which I am sorry to say have been lamentably destructive of human life. I more particularly refer to the Cornish engines than any others, because we, in Cornwall, work with steam which is generally termed high-pressure, that is varying from about 10*lbs.* per square inch to 50*lbs.* per square inch, and this is in proportion to the load of engine and the opinion of the engineer in point of economy of fuel. In making these remarks I have called to my aid the opinions of some of our most eminent engineers in conjunction with a long and extensive practice of my own, and taking into the account the very great increase of steam-engines out of Cornwall, exactly on the plan now in general use in this country, it calls loudly on all who are or may be employed in the construction of steam-engines, more especially in that part of it which is termed the boiler or steam generator, to so modify the thing as to render them as safe as possible, and to make use of steam, which would be much more safe in its operation, and equally beneficial, so far as regards economy of fuel. The form of boilers now in use in Cornwall are cylindrical, having a cylindrical tube; the general size is about 6 ft. 6 in. diameter, with tube varying from about 3 ft. 9 in. to 4 ft. diameter; about six feet long of this tube is used as the furnace or fire-place, consequently the whole of the fire is surrounded by water. Various opinions have been suggested of the causes of explosions, some attributing them to the igniting of explosive gases generated within the boilers themselves, but I think this opinion is not based upon any satisfactory or valid foundation. Under certain circumstances hydrogen gas may be formed inside a boiler, in consequence of the over-heated iron plates decomposing the water of the steam by abstracting and uniting with its oxygen; but the circumstances under which this process may go on, I conceive must be exceedingly rare, and the effect of very trifling amount. If it were possible for the gas to be formed in any considerable quantity the circumstance must be immediately known by the very perceptible effect it would have upon the working of the engine; or how, I would ask, is the gas to become of greater pressure than the steam even if the engine should not be at work when there is the same aperture for its escape. There is one fact of so strong and irrefragable a character that in my opinion it decides the fate of this hypothesis, and clearly proves that steam-boiler accidents cannot be attributed to the explosion of gases. The fact alluded to is this, that an explosion or a collapsing in the numerous class of low-pressure boilers are things never heard of, while they are too numerous among high-pressure boilers, although it is certain that the low-pressure boilers are quite as likely to form the gases as the latter. The plates of the fire-places and flues of low-pressure boilers are quite as likely to form the gases as the plates and flues of high-pressure boilers, because the low-pressure boilers are probably quite as much exposed to the mischance of becoming red-hot, and from their great capacity are likely to hold the gases in greater abundance; but notwithstanding, in low-pressure boilers no explosions so take place, no fatal accidents, no loss of life. I think in doing away with the opinion respecting gases, the causes of steam-boiler explosions may be classed as follows:—1st. In the improper form of the boiler being insufficient to bear the pressure of steam which the engineer may think proper to use.—2d. In the neglect of the engine man allowing the water to get below the back of the tube, which is the back of the fire-place, thereby allowing that part to be heated to a very high temperature, and of course rendering the iron weak and less capable of bearing the pressure of steam, and which is in proportion to that temperature. 3d. By being weakened by wear and not proper attention paid to lessen the pressure of steam in proportion to that wear. But I fear the greater number have exploded by means of using steam of an unnecessary pressure; and in order to render this fact as clear as possible, I beg to remark here that the Cornish engineers in carrying out the great principle of working steam expansively, and which principle has been the means of causing the Cornish engines to exceed all others in point of economy of fuel, I say they have (myself amongst them) lost sight of one important feature in this principle of expansion, which is that of omitting to have the aperture for the admission of steam from the boilers to the steam cylinder of a proper size, or of a size large enough for the proper admission of the steam in proportion to the load of engine and pressure of steam required. The consequence is that it is found necessary to have steam in the boiler of a much higher pressure than would be necessary, provided the aperture from the boilers to the cylinder had been a proper size—and this is in a ratio proportionate to the load of engine and rate of expansion. This important feature in the steam-engine has been so far neglected that I have known a 7-foot aperture only used for the admission of steam on a 70-inch piston. The area of the 70-inch piston being upwards of 100 times as much as the area of aperture or valve for the admission of steam, it becomes a natural inference that so small an aperture could not possibly supply one-third of such large cylinder in about a second. I mention one-third of the cylinder because that is about the average distance which the pistons do descend before the steam from the boiler is cut off, the remaining part of the stroke being performed by the expansibility of the steam which entered the cylinder for that one-third of stroke. The consequence of having such small apertures is, that it is found necessary to have steam in the boilers of a pressure very much above what would be necessary, provided the steam-pipes and steam-valve had been of a proper size; and this inconvenience becoming more as the load of engine increases, I fear that explosions of the worst character have taken place in consequence.

I have reason to believe that the present cylindrical boilers in use in this country are as safe with 30*lbs.* per square inch as the old low-pressure boilers were for the steam they used—and in all the steam-engines of which I have the management I have made it a rule for some years that I would use steam of no high pressure; since which I have had no explosion nor anything in the shape of a serious accident. The average duty of the engines has been above what it was before, and the boilers will last a considerable time longer. Respecting the lamentable explosion which took place at the Consolidated Mines a short time back, the distressing effects of which must still be fresh in your memories, it was stated that it must have been caused by the neglect of the engine man in allowing the water to get below the back of the tube; and the reason assigned for this was, because that boiler was said to be the strongest, and must have been weakened by heat to cause it to explode; and the other two boilers, which it was said were not so strong, remained unharmed. The strength of cylindrical boiler tubes to resist an external pressure, exerted on its outward surface, is a very different thing from the strength of the same tube to resist an internal pressure, because when the force is exerted on the inside of the tube, and tending to burst or rend it asunder, the relative strength or power of the tube is very easily estimated. But in the other case, when the pressure is external, the strength of the tube to resist such pressure will depend upon very different principles. The tube in this case depends for its strength on the perfect state of the circle of which it is formed, and the thickness of the plates; and it must be clear that steam of from 40*lbs.* to 50*lbs.* per square inch, acting on an arch of about four feet span, made of half plate, will cause that arch which is most imperfect to collapse first; and that if a tube has got any defect as to form, so as to render it a more imperfect arch than the next boiler alongside of it, it will yield to the pressure before the other, although in appearance it was the strongest boiler; and further, the one with the imperfection is weakest, in proportion to the amount of the imperfection, and the liability to explode becomes more, in proportion to the increased temperature and pressure of steam, thereby rendering the plate weaker through heat, and consequently less capable of resisting the increased pressure; and really if we look at an arch of four feet span only, made of iron-plate of half an inch thick, considerably weakened by heat, and with a force of 50*lbs.* per square inch acting on them, and unavoidably imperfect as to form, it becomes a matter of very little surprise to find they will collapse; under all these circumstances it appears to be too much to any of boilers having just the same appearance which is the strongest. If it were possible to form a tube of a boiler of a perfect circle, which would be the true figure of greatest resistance, there is little chance of its remaining so; the expansion and contraction, together with the increased pressure against the bottom of the tube in proportion to the height of water in the boiler, which gives upwards of a $\frac{1}{2}$ *lb.* per inch pressure more there than in the top of the tube, has a strong tendency to injure its circular form. The imperfect form of tubes to support an internal pressure is not of so much consequence, because the pressure tends to improve the form; but with an external pressure the contrary effect takes place. The extraordinary effects which often take place by means of boiler explosions, I consider are in proportion to the quantity of fire in the furnace or tube, and quantity of water in the boiler, and by means of the fire collapsing and the water bursting immediately into the fire, generates steam of an incalculable pressure, the effects of which I need not mention here. Various plans have been suggested in order to prevent explosions, some by giving a signal to the engine man when the water is got too low in the boiler, but a question arises, whether or not the occasional defective state of these things, together with the reliance or dependence the engine man would place in them, would not be the cause of more explosions in a given time than there has been without them. The common gauge cocks are sure indicators of the state of

the water in the boiler, and if the engine man neglects these things I would not place much reliance on the safety of any other thing. Lead plugs have been applied immediately over the fire, the intention of which has been that if the engine man should allow the water to get below the back of the fire-place, the lead should melt and thereby give the engine man notice of danger; but this can be of little or no use, because it requires a temperature of 610 deg. to melt the lead, which temperature will cause the iron to become so weak that steam of ordinary pressure will at least injure the boilers before it has attained the above heat. The present cylindrical boilers now in use in this country, and in many other parts, are in my opinion the most economical generators of steam, and the most safe that have been hitherto adopted; but it must be borne in mind that no boiler, of whatever form, can be safe without proper attention being paid by the engine men as to the water gauge, and by the engineers as to the pressure of steam used in proportion to the strength of boilers. And I would beg strongly to recommend that with the strength of boilers at present in use in this country, steam of more than 35*lbs.* per square inch should not be used; and that proper apertures for the admission of steam on the piston, in proportion or suitable to that pressure, should in all cases be used. I am fully satisfied that if this is properly attended to we shall have no more violent explosions.—West Briton.

EXPLOSIONS IN AMERICAN COAL MINES.

[From *Silliman's American Journal of Science*.]

Those distressing events formerly so frequent in England, are beginning to happen in this country. It is desirable that the memory of them should not pass away, but produce a strong impression on the public mind, which may lead to all possible caution and to the use of every available protection, for as our numerous mines are wrought deeper, such casualties will become more frequent. We have heard of several explosions in our mines, but cannot present the details. We are assured even that our anthracite mines are not exempt from them. We should hardly have looked for their occurrence in them, although it has been proved that a large quantity of inflammable gas is extricated by heat from these coals. The following account is from the *Richmond Compiler* of April:—

EXPLOSION OF GAS IN THE BLACK HEATH COAL MINE (U.S.).—The Black Heath Mine, worked by the "Black Heath Coal Company," is one of the richest and most extensive in this country. It is twelve miles from Richmond, in nearly a western direction, and is situated in the midst of bituminous coal-fields of unknown extent. The shaft from which the explosion recently took place, has not been long sunk, and we believe is the deepest in the Union; being more than 700 feet to its bottom. Upwards of 10,000,000 bushels of coal had been obtained in the pit reached by it; and none can conjecture how much more a further exploration would discover.

The steam-engines and apparatus for hoisting coal from the shaft were excellent; and the system and facility with which the hoisting process was conducted, produced an average of about 2500 bushels of coal per day. It is to be regretted that these operations—adding so much to our productive capital and commercial strength, have been interrupted—and this regret is increased by an afflicting catastrophe.

The explosion was most violent, but its origin is uncertain, although it is beyond all doubt that it occurred from neglect or disregard of the positive orders and regulations of the pit. The drifts and "air coasts" (passages for the air from chamber to chamber), were so arranged as to keep up constant ventilation. It is the general opinion that one of the doors of the air coasts must have been closed, and that thus the "inflammable gas" accumulated on Sunday to such an extent as to produce the explosion soon after the labourers entered the pit, on Monday morning. Sir Humphry Davy's safety lamp was regularly used in the mine, and no doubt is entertained but that it was used on that morning. It was commonly carried forward to test the presence of the gas. It may have been out of order; a slight rent in the wire gauze covering, would readily ignite the gas. Other lamps were used; and one of these may have been taken into a chamber or drift where the safety lamp had not been presented. Either of these causes would have involved carelessness. The density and inflammability of the gas might have caused the wire to have become oxidated, and thus to fail to pieces; but that could not have occurred till after indication by flame inside the gauze, of a danger in the face of which it would have been madness in the labourers to remain. Whatever might have been the immediate cause, the arrangements and rules of the pit, drawn from the lights of science and experience in mining, were such as if properly attended to, to have insured safety. But it did not do so, in order to diminish the chances of danger from even carelessness itself, to use Davy's lamp exclusively, in all pits, where there has been an exhibition of carburetted hydrogen or "inflammable gas."

One of the superintendents of the operations in the pit, who was below when the explosion took place, was a man of great skill in his profession, having been many years engaged in it, in some of the most famous of the English mines. He was a Scotchman, named John Rynard. Mr. John Hanson, a native of Chesterfield, of respectable family, was the other unfortunate superintendent. The labourers were all coloured men, and it is supposed that about forty were below.

The explosion was so powerful as to blow pieces of timber out of the shaft to a distance of one hundred yards from it. Three men were blown up in a coal hamper to a height of some thirty or forty feet above its top; two of them fell out in different directions, and were immediately killed—the third remained in it, and fell with it, escaping most miraculously with his life having both his legs broken. He is now doing very well. Much loose coal was blown from the drifts to the bottom of the shaft, and four of the bodies, as we have already stated, were taken from beneath a large bulk there, in a mutilated state. Four were taken out shortly after the explosion on Monday—none of whom died. The others are in a fair way to recover.

Every possible exertion consistent with safety has been made to rescue the unfortunate beings. It appeared upon going down the shaft, that much carbonic acid gas (the product of combustion) was present. This is called at the mines "black damp," and though not inflammable, is well known to be extremely destructive to human life. This, then, had first to be dispersed. The partitions too, in the shaft, necessary for the ingress and egress of air in the pit, were much torn to pieces by the explosion and had to be repaired, as death would have resulted to those who went down the shaft.

These explosions were formerly very common in the north of England. One occurred at the Felling colliery in Northumberland, England, on the 25th May, 1812, in which ninety-two lives were lost. This is the greatest destruction ever known from the same causes. In 1816, an explosion occurred in a mine at Durham, in which fifty-seven persons were destroyed, and in another, twenty-two were killed in the same manner. The discoveries of Sir Humphry Davy and other contributors to science and benefactors of mankind, have since rendered it certainly possible to avoid these destructive explosions.

In our mines, no explosions of any extent has ever occurred from the ignition of inflammable gas. Such events may as certainly be guarded against as the bursting of steam-boilers, the safeguards in each case being as simple as effective.

FATAL COAL-PIT ACCIDENT.—An inquest was held on Monday last, at Cradley, on the bodies of J. Smith, aged 19; W. Pritchett, 33; W. Harding, 27; and E. Flyfield, 20, who were killed in a coal-pit belonging to Mr. Panser, of Cradley Heath. It appears that at the time the accident happened, the unfortunate men, together with three others and a boy, were at work in the mine, when a great mass of coal and rubbish fell from the roof of the pit and buried the four men and the boy, and also knocked down and much injured another. On the alarm being given, the colliers from all parts of the pit proceeded to the rescue of the unfortunate sufferers. Evans was soon released from the rubbish which had fallen upon him; and the cries of the boy being heard, every energy was strained to get at him; and after removing a large quantity of coal, rubbish, &c., he was found alive, though much injured in the back. The preservation of his life was owing to the slip of coal falling in a slanting direction against the wall of the pit near which he was standing, a part falling on his loins, and leaving a space for the upper part of his body. Upwards of two hours and a half elapsed before the whole of the bodies were got out, and there can be no doubt, from the situations in which they were found, that the death of each instantaneously followed the fall of the mass under which they were buried. The expenses attending the funerals of the unfortunate men have been defrayed by their late master, Mr. Panser.

HOLYWELL AND GREENFIELD COLLIERY.—(From a Correspondent).—About eighteen months ago a joint-stock company was formed by gentlemen residing in London, Liverpool, and Manchester, for the purpose of proving the lands at the Greenfield estate for coals (the property of Sir Edward Montagu, Bart.), under the management and superintendence of Mr. Bennett, of this neighbourhood, which, I am happy to say, has fully answered the most sanguine expectations. A steam-engine is now at work, of sufficient power to drain the water from the mine, and to wind up about 300 tons of coal per day. A circular well shaft, 11 ft. diameter, is just completed to the depth of sixty-two yards, being the first bed of coals, which is 3 ft. 4 in. wide, of very superior quality. The town of Holywell will shortly be supplied with this necessary article from this colliery, to their great convenience, as it will prove a saving to the inhabitants of from three to five miles in carriage.

EASTERN COUNTIES RAILWAY.

During the earlier periods of railway enterprise, it will be recollected that exorbitant sums were demanded, and, in numerous cases, actually paid, for property through which lines of railway were apportioned to pass. It is pleasing to turn from those instances of a grasping and selfish spirit to one of a far different character, now fresh before the public. We give Mr. Labouchere's letter entire, that our readers may judge for themselves, at the same time expressing the sincere pleasure we have felt in witnessing a proceeding so disinterested and so much at variance with the general tenor of railway agreements.

"Belgrave-square, Dec. 3, 1839.
"Sir,—It will probably be in your recollection that my father, after offering every opposition in his power to the passage of the Eastern Counties Railway through the estate of Hylands, in Essex, at last acquiesced most reluctantly in an agreement (which was confirmed by Act of Parliament), by which 35,000l. was to be received as a compensation for the injury and inconvenience which he anticipated from it.

"I have now carried his wishes into effect, by selling this property, and am therefore able to judge of the amount at which the loss and inconvenience consequent upon the sale of the estate, and a change of residence, can be fairly estimated; and as I know that it never was his intention to have accepted anything beyond that, I conceive that I am acting in accordance with it, by informing you (as chairman of the railway company), that whenever the payment of 20,000l. shall have been completed, in the manner prescribed by the agreement, I shall be ready to relinquish all claim for the remaining fifteen thousand pounds.

"I have the honour to be, Sir, your obedient servant,
"To Henry Bosanquet, Esq., Chairman of the Eastern Counties Railway."
"H. LABOUCHERE."

GAS PRODUCED BY A NEW PROCESS.

An experiment in gas-lighting, by the Comte de Mal Varino, was made on Thursday evening, on a piece of waste ground at the back of Fetter-lane, in the presence of several scientific gentlemen, who were invited to witness the result. A small gasometer was erected for the purpose, which was connected by tubes with a furnace built of brick, and containing three retorts, one of which was supplied with water from a siphon, another was filled with tar, and both being decomposed in the third retort, formed the sole materials by which the gas was produced. The process appeared to be extremely simple, and the novelty of the experiment consisted in the fact, that the principal agent employed to produce the gas was common water combined with tar; but, according to the theory of the inventor of this new species of gas, any sort of bituminous or fatty matter would answer the purpose equally as well as pitch or tar. After the lapse of about half an hour employed in the experiment, during which time the process was explained to the company, the gas was turned into the burners, and a pure and powerful light was produced, perfectly free from smoke or any unpleasant smell. The purity and intensity of the flame were tested in a very satisfactory manner, and those who witnessed the experiment appeared perfectly satisfied with the result. The great advantage of this sort of gas over that produced from coal consists, it was said, in the cheapness of the materials employed in its production, the facility with which it is manufactured, and the perfection to which it is at once brought without the necessity of its undergoing the tedious and expensive process of condensation and purification, for in this instance, as soon as the preliminaries were completed, the light was produced in a perfect state within a few feet of the gasometer, which, although of inferior size, was said to be capable of affording light for ten hours to at least 500 lamps or burners. With regard to the comparative expense, it was also stated that 1000 cubic feet of gas manufactured by this process could be supplied to the public for about one-third the price now charged by the coal-gas companies; and it was said to be equally available for domestic use, and more safe than the common gas, inasmuch as small gasometers might at a trifling expense be fixed at the back of grates in private dwellings, from which the gas could be conveyed in India-rubber bags to any part of the house, thereby preventing the many accidents which occur by the use of tubes and pipes. The Comte de Mal Varino, who has conquered the difficulty hitherto experienced in bringing this species of gas into use, superintended the arrangements, and evinced a natural anxiety to bring his experiment to a successful issue. He has taken out a patent for his discovery, and he has improved upon the burners now in use so as to render the light produced more pure and intense. For this improvement he is also secured by a patent. How far gas of this description can be brought into general use, or whether in point of economy the public would be benefited by its adoption, are questions which we have not the means of deciding, and, without hazarding any opinion upon the subject, we can only say that the experiment, as far as it was tried in this instance, appeared to be quite successful.

BANK OF ENGLAND.—QUARTERLY AVERAGE OF THE WEEKLY LIABILITIES AND ASSETS, FROM SEPT. 17 TO DEC. 10, INCLUSIVE.			
LIABILITIES.		ASSETS.	
Circulation	£16,732,000	Securities	£23,764,000
Deposits	5,952,000	Bullion	2,987,000
	£22,684,000		£25,751,000

Downing-street, December 12.

SHAREHOLDERS IN PUBLIC COMPANIES AND BROKERS.—Our attention has been frequently called by commercial men, who have been sufferers in no inconsiderable amount, to the practice of sharebrokers on the sale of shares preparing the transfers, without knowing or caring, after they get their commission, what may be the legal effect to either the seller or the purchaser. In one case, where a gentleman in this town held some shares in the South-Western Railway, he employed a broker here to sell them, which the broker accordingly did, and prepared the certificate of transfer. This transfer was not notified or registered with the company. The purchaser shortly afterwards died insolvent, and the seller standing, as he of course did, as the registered holder in the books of the company, was obliged to re-accept the shares, which some period afterwards began to depreciate in value. Calls were made, and the party who had sold as he supposed, his shares, was suddenly compelled to pay the remaining calls, and incurred a heavy loss. There are several instances of this impropriety and impolicy of brokers being permitted to transact the legal part of such matters. Several shareholders in the various railway and other public companies, have lately and at various times felt the force of this observation. The remedy, however, is principally in their own hands; but we believe the statute 44 Geo. III. ch. 48, sec. 14, makes it an offence under a penalty of 50l.—*Manchester Chronicle.*

THE PROPOSED NITHDALE LINE OF RAILWAY.—The *Dumfries Times* of Wednesday, says:—"We have now the pleasure of communicating, to all interested in the Nithdale line, that the exertions of the Glasgow and Dumfries committees to get that line included in the government investigation have been completely successful."

SUPPLY OF COAL.—The enormous consumption of coals produced by the application of the steam-engine in the arts and manufactures, as well as to railways and navigation, has of late years excited the fears of many as to the possibility of the exhaustion of our coal mines. Such apprehensions are, however, altogether groundless. If the present consumption of coal be estimated at 16,000,000 tons annually, it is demonstrable that the coal-fields of this country would not be exhausted for many centuries. But, if speculations like these, the probable if not certain progress of improvement and discovery ought not to be overlooked; and we may safely pronounce, that long before such a period of time shall have rolled away, other and more powerful mechanical agents will supersede the use of coal. Philosophy already directs her finger at sources of inexhaustible power in the phenomena of electricity and magnetism. The alternated decomposition and recombination of water, by magnetism and electricity, has too close an analogy to the alternate processes of vaporization and condensation not to occur at once to every mind; the development of the gases from solid matter by the operation of the chemical affinities, and their subsequent condensation into the liquid form, has already been essayed as a source of power. In a word, the general state of physical science at the present moment, the vigour, activity, and sagacity with which researches in it are prosecuted in every civilized country, the increasing consideration in which scientific men are held, and the personal honours and rewards which begin to be conferred upon them, all justify the expectation that we are on the eve of mechanical discoveries still greater than any which have yet appeared; and that the steam-engine itself, with the gigantic powers conferred upon it by the immortal Watt, will dwindle into insignificance in comparison with the energies of nature which are still to be revealed; and that the day will come when that machine which is now extending the blessings of civilisation to the most remote skirts of the globe will cease to have existence, except in the page of history.—*The Steam-engine, by Dr. Lardner.*

BRITISH EXPORTS.

Hardware and Cutlery.—United States of America 681,704l., British West Indies 85,100l., Germany 82,065l., British North America 75,794l., East India Company's Territories and Ceylon 60,363l., France 58,533l., Foreign West Indies 51,973l., Brazil 51,570l., Italy 49,593l., Australian Settlements and Van Diemen's Land 44,739l., Russia 36,830l., Holland 36,618l.

Brass and Copper Manufactures.—France 371,363l., East India Company's Territories and Ceylon 303,132l., United States of America 140,722l., Holland 86,369l., Belgium 45,283l., British West Indies 35,633l., Germany 36,617l., Italy and the Italian Islands 34,391l., British North America 39,672l., States of the Rio de la Plata 25,560l.

Iron and Steel, wrought and unwrought.—United States of America 634,395l., Holland 224,966l., Italy and the Italian Islands 186,368l., Germany 164,900l., British North America 163,491l., East India Company's Territories and Ceylon 137,707l., British West Indies 131,377l., France 103,026l., Denmark 97,690l.

Tin and Pewter/Wares and Tin Plates.—United States of America 240,540l., Italy and the Italian Islands 38,245l., France 30,165l., Germany 18,868l., British West Indies 13,937l., British North America 11,992l., Holland 11,538l., Brazil 10,655l., Cuba and Foreign West Indies 9075l.

Machinery and Millwork.—France 124,361l., Belgium 64,946l., Germany 59,669l., Holland 48,947l., British West Indies 42,858l., Italy and the Italian Islands 41,985l., United States of America 30,303l., East India Company's Territories and Ceylon 29,869l., Mauritius 23,560l., Sumatra, Java, and Islands of the Indian Seas 23,116l., Cuba and Foreign West Indies 21,812l., Prussia 19,066l., Turkey 18,897l., Russia 15,714l., Brazil 13,857l.—*Companion to the Almanac for 1840.*

PURCHASES OF COPPER ORES AT REDRUTH, DEC. 5.

Purchasers.	Mines.	Tons.	Total.	Price.	Amount.	Total Amount.
MINES ROYAL.				£ s. d.	£ s. d.	£ s. d.
1. Co.	Doleath	50	510 6	276 5 0		
	United Hills	21	210 6	74 4 0		
	Wheal Vor	70	412 0	322 0 0		
	Wheal Harriet	39	35 6	194 0 0		
		40	412 0	185 0 0		
		26	4 7 6	109 7 6		
	South Wheal Bassett	373	4 3 6	160 9 6		
		22	6 4 6	131 19 0		
		21	11 7 6	233 17 6		
	West Wheal Jewel	79	4 19 6	348 5 6		
	South Towan	35	8 14 6	199 7 6		
2. VIVIAN & SONS.	Consolidated Mines	37	419 6	184 1 0		2106 5 3
	Tincroft	24	3 9 6	59 0 0		
3. FREEMAN & CO.	East Wheal Crofty	106	6 17 6	686 0 0		948 0 6
		78	6 2 0	430 4 0		
		70	7 9 6	528 5 0		
		80	4 13 6	372 0 0		
	Fowey Consols	25	6 19 6	149 7 6		
	Tincroft	81	3 10 6	211 7 6		
	Wheal Vor	71	4 11 6	324 16 6		
4. GREENFELL & CO.	East Wheal Crofty	43	8 10 6	151 11 6		2518 10 8
		47	1 9 6	96 16 6		
		64	3 14 6	238 8 0		
		61	3 16 6	240 19 6		
		62	1 15 6	110 1 6		
	Stray Park	22	2 2 0	46 4 0		
5. SIMS, WILLIAMS, & CO.	Fowey Consols	51	6 18 6	346 12 0		886 0 6
		77	4 11 6	352 8 6		
		26	5 19 6	149 7 6		
	Tincroft	161	3 15 6	58 10 6		
		144	3 2 6	45 6 6		
		81	2 10 6	21 17 6		
	Wheal Harriet	88	8 6 6	124 9 0		
	Stray Park	64	3 15 6	244 13 0		
		52	4 13 0	241 16 0		
6. WILLIAMS, FORSTER & CO.	Consolidated Mines	87	5 5 0	456 15 0		1694 17 11
		81	7 7 0	595 7 0		
		78	8 13 6	640 11 6		
		72	4 16 0	345 12 6		
		69	5 0 6	346 14 6		
		104	5 12 0	374 19 0		
	East Pool	93	3 9 6	109 4 6		
		70	9 0 6	630 0 0		
		69	8 13 6	598 11 6		
	United Hills	58	3 0 6	281 6 6		
		46	4 9 0	191 7 0		
	Fowey Consols	514	6 18 6	356 12 0		4274 4 8
7. VIGORS & CO.	East Wheal Crofty	38	2 6 6	204 12 0		
	Consolidated Mines	43	4 19 6	184 1 6		
		71	4 2 6	292 12 6		
	East Pool	38	3 11 6	117 19 0		
	Doleath	75	2 0 6	131 17 6		
		57	8 8 6	471 13 6		
		56	3 10 6	196 0 0		
		45	2 0 6	91 2 6		
		41	5 0 6	218 6 0		
		45	4 9 6	191 7 0		
		40	2 0 6	87 0 0		
		79	12 0 6	361 13 6		
	Tincroft	24	2 11 6	94 13 0		
		36	3 0 6	182 0 0		
		144	3 0 6	59 0 0		
		144	3 0 6	45 6 6		
		81	2 10 6	21 17 6		
	South Wheal Bassett	373	4 6 6	160 9 6		
		22	6 4 6	131 19 0		
	West Wheal Jewel	79	14 17 6	265 17 6		8727 8 3
		8724				
		3409		£17,447 8 6		

SALE OF COPPER ORES AT REDRUTH.

Sampled Nov. 27, and so 1 at Andrew's Hotel, Redruth, Dec. 13.

Mine.	Tons.	Price.	Purchasers.	Mine.	Tons.	Price.	Purchasers.
Carn Brea	29	£ 2 0 0.	Mines Royal	Tresavean	90	£ 4 12 6.	Mines Royal
ditto	75	£ 2 0 0.	—	ditto	74	£ 2 0 0.	—
ditto	70	£ 3 6 0.	Vigors & Co.	ditto	67	£ 2 0 0.	—
ditto	69	£ 5 4 6.	—	Wh. Virgin	27	£ 4 10 6.	Vigors & Co.
ditto	68	£ 8 10 6.	Mines Royal	ditto	29	£ 4 7 0.	—
ditto	67	£ 8 8 6.	—	ditto	28	£ 4 0 6.	—
ditto	66	£ 3 1 0.	Williams	ditto	15	£ 2 10 0.	Williams
ditto	65	£ 3 10 6.	Vivians	ditto	16	£ 2 3 6.	Vivians
ditto	64	£ 2 7 6.	Williams	Unity W.	82	£ 5 9 6.	Williams
ditto	63	£ 1 12 0.	—	ditto	39	£ 5 0 6.	—
ditto	62	£ 13 13 0.	Mines Royal Union	ditto	38	£ 4 10 6.	Mines Royal
ditto	61	£ 8 11 6.	Vigors & Co.	Wh. Julia	45	£ 16 0.	Neill & Co.
ditto	60	£ 17 0.	Williams	ditto	31	£ 15 0.	Mines Royal
ditto	59	£ 13 6.	Mines Royal	ditto	30	£ 4 0 6.	Neill & Co.
ditto	48	£ 17 0.	Williams	ditto	32	£ 8 12 6.	Mines Royal
ditto	36	£ 13 6.	Mines Royal	W. Provid.	33	£ 4 0 6.	Vigors & Co.
ditto	40	£ 17 0.	Vigors & Co.	ditto	36	£ 14 1 0.	Williams
ditto	35	£ 13 6.	—	ditto	29	£ 15 11 6.	—
ditto	34	£ 2 7 0.	Vivians	Reilian	64	£ 3 14 6.	Vigors & Co.
ditto	33	£ 4 11 0.	Freemans	ditto	42	£ 3 10 6.	Neill & Co.
ditto	32	£ 3 9 6.	Vigors & Co.	ditto	31	£ 11 0 6.	Vigors & Co.
Wh. Bottom	21	£ 2 7 0.	Freemans	Wh. Mary	24	£ 7 1 6.	—
Fowey C.	91	£ 3 9 0.	Freemans	Wh. Buckets	2	£ 4 10 6.	Williams
ditto	88	£ 5 0 0.	—				
ditto	86	£ 7 0 0.	Williams				

TOTAL PRODUCE.

Carn Brea Mines	940	£ 4603 4 0	Wh. Virgin	271	£ 984 18 0
Wh. Bottom	348	£ 1700 0 0	Wh. Provid.	178	£ 1233 10 6
Fowey Consols	339	£ 1435 17 0	Reilian	111	£ 518 11 6
Tresavean	331	£ 1225 4 0	Wheal Tiddy	45	£ 331 0 0
Wh. Unity Wood	179	£ 934 9 6	Wheal Mary	24	£ 171 10 0
Union			Wh. Buckets	2	£ 15 0 0

Average standard, 189l. 5s.—Average produce, 73.—Quantity of ore, 3002.—Quantity of fine copper, 200 tons 2 cwt.—Amount of money, 14,725l. 8s. 6d.—Average standard of last sale, 116l. 2s.—Produce, 24.

Copper ores for sale at Redruth, on Thursday next. Mines and Parcels.—Tresavean, 120; Fowey Consols, 244; Trevelick, 119; Buffed Mines, 140; Levant, 120; Wh. Gowan, 87; North Down, 67; De Dunstanville Mines, 29; East Redruth, 15.—Total, 1234 tons.

Copper ores for sale on Thursday, week, at Andrew's Hotel, Redruth. Mines and Parcels.—United Mines, 160; Consolidated Mines, 231; Great St. George, 440; Fowey Consols, 249; Godolphin, 233; Trevelick Consols, 107; Wheal Harmony and Cardew, 180; South Caradon, 136; Wheal Leeds, 30; Wheal Curtis, 30; Carnice, 52; Rowe's Ore, 33; Garnick, 27.—Total, 2168.

SALE OF COPPER ORES AT LIVERPOOL.

Mine.	Tons.	Prod.	Standard.	Price.	Purchasers.
Ballymagh...	114	24	120 7 0	£ 1 10 3	British & Foreign
ditto	91	34	124 17 0	£ 1 16 4	Copper Company

A further cargo of 106 tons from Ballymagh has also arrived in Liverpool, for sale to the British Mining Association.

SALE OF BLACK TIN.

Black Tin sold at Trevelick, on the 10th of December.

Mine.	Tons.	Price.	Per Cent.	Total Amount.	Purchasers.
St. Ives Consols	30	£ 42 12 0	....	1275 15 0	Williams, Bother & Co.
Great Work	30	£ 42 12 0	....	1275 15 0	Williams.
Charlton U. M.	30	£ 42 12 0	....	1275 15 0	Williams.
Balteswidden	24	£ 42 12 0	....	1008 0 0	Batten & Son, Bother & Co. Williams.
Wheal Mary	11	£ 42 12 0	....	464 32 0	Williams.
Boscowan	143	£ 50 3 0	....	7185 9 0	Williams.
Boscowan	14	£ 50 3 0	....	708 10 0	Bother & Co. Batten & Son.
Wheal Olds	13	£ 49 0 0	....	637 0 0	Batten & Son, Bother & Co.
Murston Mines	5	£ 45 10 0	....	225 5 0	Williams.
Boswidden	45	£ 44 15 0	....	1998 7 6	Williams.
North Towan	1	£ 40 10 0	....	40 10 0	Daubert & Co. Bother & Co. Greenfield & Co.
Levant	14	£ 40 2 0	....	562 8 0	Batten & Son, Daubert & Co.
Wheal Reeth	32	£ 44 0 0	....	1408 0 0	Bother & Co. Daubert & Co.
Caradon Consols	7	£ 46 7 0	....	326 9 0	Bother & Co. Batten & Son.
Tregavar	3	£ 48 0 0	....	144 0 0	Batten & Son.
	207			£4112 0 0	

SALE OF COPPER ORES AT SWANSEA.

Copper ores for sale December 18.—Knockmahon 136, ditto 11

JOINT STOCK BANKS

Share.	NAME OF COMPANY.	Amount of Shares.	Amount paid.	Price.	Dividend per share.	Next payment.
25,000	Agrie. & Com. of Irel.	25	10	—	—	—
5,000	Australasia	40	40	—	—	Jan.
50,000	Bank of Scotland	100	854	678	6	Oct.
10,000	Birmingham Bank.	50	18	233	10	Mar.
20,000	British Linen Co.	100	100	—	—	Dec.
20,000	British North Amer.	50	25	27	6	Mar.
90,000	Commercial	5	5	24	7	—
20,000	Colonial	25	25	304	5	Jan.
5,000	Devon and Cornwall	100	25	45	8	—
5,000	Equitable Loan Co.	—	9	10	—	—
10,000	Foreign Banking Co.	—	—	—	—	—
10,000	Glasgow Banking Co.	250	50	65	7	Dec.
10,000	Gloucestershire	100	19	25	10	Feb.
6,000	Hampshire	50	5	—	10	Aug.
10,000	Hibernian	100	25	21	4	—
3,000	Devon & Cor. Bg. Co.	—	20	36	—	—
30,000	London & Westmins.	100	25	21	8	Mar.
3,000	Lancaster	100	30	—	10	Aug.
25,000	Liverpool	100	19	233	10	July
20,000	Long-Joint Stock Co.	50	19	114	5	June
30,000	Manch. & Liver. Dia.	100	15	12	7	Mar.
20,000	Manchester	100	15	12	13	Oct.
25,000	Monm. & Glouc.	50	15	13	—	—

£00,000	Nat. Bk. of Ireland	50	174	14	5	
10,000	Nat. Provincial. Engl.	100	35	344	5	Jan.
10,000	Ditto New	20	10	104	5	
20,000	Wor. & Cent. B. of Eng.	10	10	5	5	Dec.
0,000	North Wilt.	25	5	102	5	
20,000	Prov. Bk. of Ireland	100	25	402	5	July
4,000	Ditto New	10	10	18	5	
20,000	Royal of Scotland...	100	109	165	6	
7,000	South African	...	...	5	...	
20,000	S. of Ireland, Cork	25	5	5	...	
20,000	Western of Scotland	20	40	...	...	July

NEW LIGHT AND COKE COMPANIES		13	24	74	8	—
00 Alliance	10	5	—	—	—	—
00 Bath	20	16	22	10	—	Sept.
00 Bradford	25	25	—	—	—	—
00 British	40	18	21	1	—	May
00 Do. Provincial	20	19	23	13	—	Nov.
28 Birmingham	77½	60	93	54	—	July
00 Birm. & Staffordshire	50	50	73	4	—	Sept.
00 Brentford	50	50	19	4	—	April
00 Bristol	20	20	—	—	—	Sept.
00 Do. New	20	19	11	24	—	Feb.
71 Brighton	20	18	9½	24	—	Nov.
83 Carlisle	25	—	10½	—	—	—
00 Continental Consolidat.	75	82½	106	64	—	July
00 Canterbury	50	50	55	6	—	Jan.
00 Chelmsford	50	50	42	4	—	Dec.
00 Cheltenham	40	50	75	8	—	Oct.
00 City of London	100	100	105	10	—	Sept
00 Do. New	100	75	114	6	—	Dec.
00 Coventry	25	25	24	—	—	—
00 Derby	50	50	—	—	—	—
00 Dover	50	50	—	—	—	—
00 Dudley	20	20	17	5	—	—
00 Edinburgh	25	25	—	—	—	—
00 Edinburgh and Alloa	—	14	—	—	—	—
00 Exeter	40	50	—	—	—	—
00 Equitable	40	50	26	3	—	June
00 European	20	15	13½	—	—	Aug.
00 Glasgow	25	25	34	10	—	—
00 Greenwich Railw. Gas	—	1	—	—	—	—

Do. Bonds.....	100	100	4	—
Do. Ironwork.....	—	10	—	—
Do. Locomotives.....	25	20	18	Aug.
Do. Independent.....	—	—	6	Oct.
Do. Leicester.....	80	50	—	—
Do. Leith Coal Gas.....	20	20	—	—
Do. Liverpool.....	242	242	360	—
Do. N. Gas and Coke.....	100	100	97	—
Do. (New Do.).....	—	60	—	—
Do. Maidstone.....	50	50	10	Feb.
Do. Manchester.....	80	39	31	June
Do. Portsea.....	—	—	—	—
Do. Poplar.....	50	50	—	—
Do. Ratcliff.....	100	80	69	Sept.

South Metropolitan ..	50	22	19	4	July
Sheffield ..	..	16	..	..	..
Shrewsbury ..	..	10	..	..	..
Swansea ..	50	50	..	..	..
United General ..	50	46	36	5	Jan.
Warwick ..	50	50	50	5	Jan.
Wakefield ..	25	25	229	14	Jan.
Warrington ..	20	20	20	1	Oct.
Westminster Chartered ..	50	50	574	5	Dec.
Ditto New ..	50	10	11	128	Dec.
Worthing ..	50	50	..	5	Aug.
Yarmouth ..	..	..	..	..	..

DOCKS.						
65 Commercial	100	100	66½	3	July	
East and West India Stock.....	100	100	145	..	Jan.	
88 East Country	100	100	10			
107.5s. 10 London. Stk	..	..	65	23	Dec.	
Ditto Bonds ....	..	..	190	4		
99 Bristol	147½	147½	74	21½	Dec.	
124 Ditto North .....	..	..	113	8	Nov.	
70 Folkestone Harbour	50	50	..	..	..
100 Ditto Bonds .....	..	..	5	..	..
100 Grand Collier Docks	50	1	..	..	..
32 St. Katharine. Stock	100	100	106	5	Jan.	

Do. Bonds for 10 years	20	3	194	4	Oct.
Do. Deepford Pier	20	3	111	—	—
Do. Southampton	30	3	22	—	—

BRIDGES.					
Hammersmith	50	50	22	1s	Jan.
Southwark v. new sub.	62½	62½	23	—	—
Do. New of 74 per cent.	50	50	14	18	Dec.
Vauxhall	704	704	254	19s	Dec.
Waterloo	190	190	3	—	—
Do. old Annuities of 81.	60	60	21	22s	Feb.
Do. new do. of 74.	40	40	214	19s 3	Feb.
Ditto Bonds	—	—	120	8	Feb.

WATER WORKS.					
Birmingham	25	25	20	10s	—
Colchester	100	100	—	—	—
East London	100	100	162	6	Jan.
Leamington	50	50	—	—	—
Leamington	50	50	—	—	—

Chicago 2000 Stock	100	100	45	2	Jan.
Liverpool Buoyle	220	220	325	10	Jan.
New River Land. Bridge	..	..	..	..	..
Water Annuities	..	..	67	24	Oct.
Manchester & Salford	100	50	344	24	Mar.
Orkney Island	50	50	..	..	..
Plymouth & Farlington	40	50	21	1	..
Stamagrate	10	9	110	..	..
St. Paul & N. Lond.	100	100	104	44	Oct.
West Middlesex	634	624	100	44	Dec.
York Building Co. L. F.	100	100	35	114	Oct.
ROADS.					
Archw. and Kent Tr.	100	20	..	1	1/2
Barking	100	100	274	14	1/2
Commercial	100	100	75	1	1/2
Co. East India Dock Br.	100	100	3	9	1/2
Great Dover Str.	..	70	..	14	1/2
Highgate Archway	..	301/8	3	..	..
New North Rd.	Stock	100	..	..	..
LITERARY INSTITUTIONS.					
Belaids (Gal. of Science	50	..	..	..	..
London, W. Bromse Tiek.	75	75	18
London University	100	100	9
Masell	35	35	7
King's College	100	100	104

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